

FIFTIETH ANNUAL REPORT  
OF THE  
BOARD OF TRUSTEES  
OF THE  
OHIO STATE UNIVERSITY  
TO THE  
GOVERNOR OF OHIO  
FOR THE  
YEAR ENDING JUNE 30  
1920

---

PRESS OF  
OHIO STATE REFORMATORY  
1921

THE OHIO STATE UNIVERSITY

PRESIDENT'S OFFICE

W. O. THOMPSON, PRESIDENT

*Honorable JAMES M. COX, Governor of Ohio,*

Columbus, Ohio.

MY DEAR SIR:—I have the honor to present to you the annual report of the Board of Trustees of the Ohio State University for the year ending June 30, 1920, as required by law.

Yours very truly,

JOHN F. CUNNINGHAM,

*Chairman, Board of Trustees.*



## ANNUAL REPORT OF THE PRESIDENT

*Honorable JOHN F. CUNNINGHAM, Chairman of the Board of Trustees,  
The Ohio State University.*

DEAR SIR:—I have the honor to present through you to the Board of Trustees of the Ohio State University for transmission to the Governor of Ohio, as required by law, the fiftieth annual report of the President of the Ohio State University, for the year ending June 30, 1920. I transmit also the annual reports from the several colleges and departments and certain other committee reports.

### THE BOARD OF TRUSTEES

No change in the personnel of the Board has occurred during the year. The term of Judge Benjamin Franklin McCann terminated May 13, 1920. His reappointment for a term of seven years by Governor James M. Cox is accepted, not only as a tribute to the character and service of Judge McCann, but as a reaffirmation of the well established policy of continuity in the membership of the Board.

### THE FACULTY

The death of Professor Benjamin Lester Bowen at his residence, 775 East Broad Street, June 28, 1920, was a distinct shock to many of his friends, although it was known that his leave of absence for the second semester was due to failing health.

Professor Bowen was born in Chili, New York, July 5, 1860. His parents were Benjamin Franklin and Mary Frances Bowen. He graduated from the University of Rochester in 1881 with the degree of Bachelor of Arts. He studied abroad in 1885-1887 in Paris, Bonn, Rome and Madrid. While in service at the Ohio State University he spent a year on leave of absence as a student. For four years he attended Johns Hopkins University where he received the degree of Doctor of Philosophy in 1888. He served one year as Professor of French and Latin at Bowdoin College and then came to the Ohio State University in 1889, remaining in continuous service until his death.

Professor Bowen was an active and painstaking member of Committees for the University and for the Language Associations in which he held membership. His teaching was characterized by scrupulous care and fidelity to the best standards in education. His contributions to his own field of study were, "Introduction to Modern French Lyrics," 1891; "First Italian Readings," 1897; "Chateaubriand's Atala and Rene," 1901; "First Scientific French Reader," 1902, and occasional contributions to current modern language magazines.

Professor Bowen enjoyed the confidence and esteem of many of the teachers of modern languages throughout the country and for thirty-one

years held a place of high honor in the University. The University recognizes with gratitude his services and records its appreciation of his character, his scholarship, his devotion to the interests of the department of Romance Languages of which he was the head and his loyalty to all University interests.

#### ALFRED ROGERSON BARRINGTON

In this connection it is appropriate to make mention of the death of Mr. Barrington, June 5, 1919. Although not a member of the Faculty Mr. Barrington for some years had been Director of the Glee Clubs and teacher of singing for many individual students. He grew in favor as acquaintance developed and in later years was employed by the University to have charge of students' musical organizations and to develop through the year a chorus for the Commencement week. His first attempt in this field was so signally successful that the arrangement was continued until his death at the age of sixty. He was a general favorite among the students and affectionately known as "dad" Barrington.

#### RETIREMENT OF DEAN KNIGHT

Under date of November 26, 1919, Professor George Wells Knight sent a communication to the President expressing his desire to be relieved of the Deanship of College of Education, said release to take effect at the end of the academic year. This resignation was accepted by the Board of Trustees effective June 30, 1920, and Professor Knight was continued as Professor and Head of the Department of American History.

While this is not the time to offer an estimate of the services of Professor Knight to the University, it may be appropriately recorded that he came to the Deanship of the College of Education at the earnest request of the University in May, 1914, and has served with great efficiency during these six years. Professor Knight began his service in the University as Professor of History and English Literature in 1885. Subsequently, he was assigned, in addition to this work, to the field of Political Economy and Political Science, and for a time in the College of Law as teacher of Constitutional Law. He served as Acting Dean of the College of Law during the vacancy caused by the death of Dean J. H. Outhwaite in 1907. The division of departments as the years passed made it possible for Professor Knight in 1909 to confine his efforts to his chosen field of American History where it is hoped he may have many years of active and happy service.

By resolution of the Board of Trustees the President was authorized to convey to Professor Knight the thanks and appreciation of the Trustees for his service as Dean. It is a pleasure to record once more the appreciation of the University in his service.



## THE PROGRESS OF THE YEAR

The year was the first full year after the close of the great World War. For that reason alone it was characterized by a strong desire to reestablish such features of the University life as had been interrupted by the War. There was, as everywhere, some anxiety as to the adjustment of salaries to the rapid and increasing demand in the cost of living. This state of mind brought about some discussion to which the trustees lent a sympathetic ear. The feeling was universal that some considerable increase was necessary as a matter of justice to a Faculty long underpaid. While considerable earnestness was manifested in these discussions it may be said in passing that there was no spirit of revolt or of desire even to transfer other universities or to commercial activities. The Faculty as a body remained loyal and devoted to the University and to the teacher's calling. It is true that some members accepted invitations to other universities but not in such numbers as to indicate anything more than the usual interchange among institutions.

It is gratifying to report that during the year the legislature made some provision for increased revenues to be applied to the increase of salaries. The feeling in the legislature was universally sympathetic with the movement for increased salaries. The revenue situation in the state, however, made it impossible to accomplish all that the legislature would have supported. The situation has been improved but the provision for salaries is still inadequate and remains the chief need of the University at the coming session of the General Assembly in January, 1921.

## LEAVES OF ABSENCE

The long established custom of granting leave of absence to a limited number of the teaching force on part salary was followed for the past year, but not to so great an extent as in some former years owing in part to the fact that an unusual number had been absent during the war; in part to the embarrassment in arranging a living schedule on part salary with constantly advancing prices and in part to the need of the entire force of teachers to provide for the needs of the suddenly swollen student roll after the war.

The list of leaves of absence for the year is as follows:

Norman Scherer.....	Assistant Professor .....	Horticulture
H. C. Hockett.....	Professor .....	American History
Alice Robinson.....	Assistant Professor .....	Art
W. J. Kostir.....	Instructor .....	Zoology and Entomology
R. O. Busey.....	Assistant Professor .....	German
Septimus Sisson.....	Professor .....	Veterinary Medicine
George S. Chapin.....	Assistant Professor.....	Romance Languages
Jerry H. Service.....	Instructor.....	Physics
Lila Skinner.....	Instructor.....	Home Economics (1st Semester)
George R. Twiss.....	Professor.....	Prin. and Prac. Education (2nd Semester)
B. L. Bowen.....	Professor.....	Romance Languages (2nd Semester)
John E. Evans.....	Instructor.....	Psychology (2nd Semester)
Robert F. Griggs.....	Professor.....	Botany (2nd Semester)
F. W. Coker.....	Professor.....	Political Science (2nd Semester)



## EMERGENCY INSTRUCTION

The unexpected increase in the student roll in September, 1919, presented the necessity of appealing to the Emergency Board for funds with which to employ such instruction as was available. The Emergency Board was generous and granted every dollar the University applied for. This action was keenly appreciated and record is here made of that appreciation.

This method of dealing with a situation, however, was due to failure in part to foresee and in greater part to failure to provide. The legislature beset with requests far beyond the prospective income of the state is quite apt to temporize with a situation until it becomes acute. This is exactly what has happened in Ohio as to the support of education in all branches. The legislature very properly first made provision for much needed funds for the public schools and brought some relief to a condition that for years had been steadily growing more desperate. There remains yet much to be done before the public schools are adequately provided for.

The Universities and Normal Schools have been given partial relief. The recognition of this fact by the last General Assembly forms the basis of the hope that further relief will be provided next year. The demands made by the people of the state must be met in some substantial way.

The trustees in response to the sentiment expressed among members of the legislature have provided for a non-resident fee of fifty dollars per annum in addition to the fees paid by resident students. They have also provided for a matriculation fee charged once for all against all students registering for the first time. This really is a privilege fee and is payable alike by resident and non-resident students.

By act of the legislature all student fees are now cornered into the treasury as available resources for salaries. This action was practically an emergency procedure in view of the admitted needs of the University and the inability of the legislature to provide at the time a revenue system adequate to the needs of the state.

ENROLLMENT AND DEGREES GRANTED  
1919-1920

Following the custom inaugurated last year, the usual statistics given in this portion of the report are now set up in an appendix to which reference may be made.

It may be worth while, however, to invite attention to the significance of the statistics for enrollment by states and foreign countries, by the counties of Ohio, and to the religious census of students. This last table shows very distinctly that the University is serving practically all types of religious thought and activity. The effort of the University has been to so administer affairs as to cultivate between different types of religious thought the utmost cordiality and good will and to develop what might be regarded as a high type of religious freedom rather than the narrower conception of tolerance.



The appendix on the occupation of parents of the students is perhaps the most significant statistical table found in the report. The classification of these activities is largely in the statements of the students themselves. These cards are filled out at home before the student's registration is complete and in the main are found in this report just as they themselves have given it. In a few instances, we undertook to reduce the number by classification that does no violence to the statement on the original card. This table shows very distinctly that all the industrial classes of the state are making a distinct effort toward the higher education of their sons and daughters and that the University is rendering a real service in this field. The development of the modern high school is, of course, the basis on which the University builds and through this development the service to the industrial classes is greatly increased in the sphere of secondary education. It is gratifying to know that from this general foundation the educational results have proved the wisdom of the conception of education underlying the Land Grant College.

#### THE BUILDING SITUATION

The entry of the United States upon war with the resulting re-arrangement of all activities made it impossible for the University to go on with the buildings for which the legislature had made appropriations. The economic situation since the signing of the Armistice has not improved in such way as to make it possible, up to this date, to secure public contracts for building enterprises. The cost-plus system inaugurated during the war continues in effect in Columbus. The high cost of materials, the scarcity of labor together with the uncertainty involved in contracts all combine to make it impossible to secure a bid on any building at a figure that could for a moment be contemplated. The result is that the University has made no progress in its building program but has been congested with an increased number of students. Every need that existed in 1916 is accentuated today. There is at the present moment approximately \$400,000.00 appropriated for buildings not one dollar of which the University is able to utilize. This is a practical difficulty of the State which cannot long be tolerated. The first suggestion is whether the state could not authorize by statute that the University could build with state material, employing prison labor, and such other necessary supervision of labor as would make it possible to go on with needed construction. If such a provision were made it would be quite possible for the University to construct the chemical laboratory and the buildings for the farm, and to make progress with some other much needed construction. Moreover, the actual cost under such a method would be less than under the usual methods of competitive bidding, while at the same time it would enable the state to utilize the product of state enterprises elsewhere. It is a mistaken theory if we assume that the state may be halted or defeated in making provision for its own needs. Any economic condition of this sort that persists for any length of



time at once raises the question whether it is possible for government to function in the presence of diverse economic conditions. The University is one of the most active agencies of the state and at the same time the largest single money spending agency. It is engaged in the education annually of thousands of the young men and young women whose parents are immediately interested in a suitable preparation on the part of the University for this work of education. The situation, therefore, is not a request from the University but a request from these thousands of students and their parents to the effect that the University may be prepared and equipped to do the work of education for which the people are making an increasing demand.

The state cannot commit itself under any theory of public education to a limitation of facilities not based upon an equal opportunity for all prepared to take the education. A state university may not discriminate between candidates who have met the requirements established by law and controlling the organization of higher education. It is worth while to note in passing that this has been done not at the request of the state university but at the instance of the legislature itself. The inspection of high schools, the requirements for entrance to the University, and all official regulations in that matter grew out of the new school code and the conditions were set without being initiated or urged from the University. The University, of course, accepts that situation in good faith, but it may with equally good faith, insist that the legislature should now make it possible for the University to meet the demands made by the citizens of the commonwealth. The building program for the present is the one obstacle where there seems to be no relief. Remedial legislation would make it possible for the University to equip itself to meet the needs pressing upon it. It is earnestly recommended, therefore, that the governor of the state and the legislature give this subject some thoughtful consideration.

As intimated already, appropriations have been made for the construction of a Women's Building to include a gymnasium for the young women, for an addition to the Chemistry Building, and for certain buildings for the College of agriculture in the interests of live stock.

These appropriations will lapse but should be carried forward as not making any additional drain upon the finances of the state. It is hoped that the legislature will not only carry these appropriations but in certain instances increase them if prospects remain for the increased cost of material.

There are certain new buildings for which appropriations have not been made but to which practical consent was given at the last legislature. A bill for a building for the College of Commerce and Journalism was passed by the Senate and the bill referred to an appropriate committee but not acted upon by the House. A bill was also introduced for a General Hospital for the College of Medicine. The College of Education should have an adequate building if the state intends that through this



agency the University shall carry into effect legislation now on the statute books. There is abroad in certain circles a sentiment that buildings are not utilized as they should be and that, therefore, the building program of a college or university is less urgent than is usually made to appear. This criticism has been offered upon a number of universities including Ohio State as well as upon public school buildings. Upon this general theme it may be well to remark that no educational schedule can be made to operate continuously for all the buildings, save possibly a Library or a limited number of classrooms. Laboratories are usually assigned to specific purposes and can be used only for such purposes. A college or university, therefore, having a large number of laboratory subjects must have an equally large number of laboratories and they must be equipped for the particular uses in mind or they are practically useless. Then there are lecture rooms where apparatus is essential and in these cases it is ordinarily necessary to have at least half an hour for preparation before the lecture and some time after the lecture for the care of the apparatus. In all such instances it is idle to think that because the lecture occupies one hour the room itself is available for such lectures continuously. The tendency in modern education is for a larger use of illustrative material, for apparatus, and for such equipment as requires the individual use of a room. In making up, therefore, the average time in which a particular space may be occupied there is an easy tendency to overlook the special uses for which a considerable space in a large university must of necessity be assigned. At the present time a recitation building given over exclusively to classroom purposes apart from laboratories would render a very distinct service to a number of departments.

There is the general subject of dormitories that has been brought to the attention of the legislature repeatedly and at least once in an earnest appeal by the governor of the state. The theory of the University has been that the primary attitude was to provide the facilities for instruction before providing facilities for housing and boarding. This position, however, is disputed by a great many intelligent people. It is not necessary to argue it to a conclusion but it may be well to keep in mind that dormitories were provided at the Ohio State University for the accommodation of students the attendance would probably increase more rapidly than it has increased and other conditions be more congested than they now are. The truth is that the University has never offered any facilities for education which the people have not promptly utilized. A glance at the statistical table in the appendix as to the occupation of parents of the students at the Ohio State University will convince any one that the University is serving all classes and conditions in the Commonwealth. The fact that the High Schools of the state are graduating nearly twenty thousand young men and women annually is a factor that cannot be overlooked, in estimating the number of students liable to enter colleges and



universities every year. The building program should keep this fact in full view if adequate and appropriate facilities are to be provided. The state must face the question of providing adequately for the education of its young men and young women. From the standpoint of dormitories the State University is probably the least well equipped of any institution in the state.

#### NOTES ON BUILDINGS

##### PARAGRAPH 1. *General Considerations.*

The distinction between essential and non-essential industries as interpreted during the war arrested all building enterprises and activities except those having governmental approval. The Trustees of the University recognizing the public necessity and in response to a suggestion from the Governor and members of the Board of Control declined to attempt any building after war was declared except the Barracks built for military purposes. After the close of the war prices were high and steadily advanced. The cost-plus system was the only safe method for contractors. Repeated efforts by the University failed to secure bids for desired buildings. The range of prices continued so high that as a matter of public policy the Trustees adopted the following resolution April 6, 1920:

"Resolved: That in view of the prevailing high cost of materials and the constantly advancing prices; and in view of the resulting excessive costs of construction and impossibility of any contracts for buildings, the Trustees of the Ohio State University declare their belief that the proper protection of the interests of the State require that money now appropriated and available for construction be not expended and that all building plans be abandoned until industrial conditions warrant the use of public money for the construction of buildings."

Under the stress of war and the resulting economic conditions the University building enterprises have been deferred for more than three years. Meantime the demands have greatly increased. The needs existing in 1916 are more imperative now than at that time.

The following appropriations have been made by the legislature. Plans for the building have been approved by the Trustees and by state officials and are now on file in the office of the Auditor of State ready for advertising in accordance with law as soon as building conditions will warrant. These appropriations lapse June 30, 1921, and should be re-appropriated by the present General Assembly:

1. The Women's Building .....	\$240,000
2. The Chemistry Building.....	115,000
3. The Field Artillery Barn .....	10,000
4. The Sheep Building .....	15,000
5. The Swine Building .....	10,000

Unless the cost of construction shall decline within the biennium some, if not all, of the above appropriations should be increased in order



to avoid a reduction of the facilities proposed. This situation accounts for the larger amounts asked for in the building program as outlined below. All these buildings have the renewed approval of the Trustees.

PARAGRAPH 2. *The Power House.*

This is the heart of the physical plant. It is useless to think of additional buildings unless provision of power, light and heat is made. The legislature has provided the first unit of the New Power House. It now remains to add to it from time to time as the needs develop. At present the plant carries a good portion of the year an overload of twenty percent. The present horse power capacity is 2450. The overload is now so heavy that the addition of new buildings and additional power is imperative. Indeed it is doubtful whether the present situation can be justified. Any serious breakdown, liable to occur at any time, would close the University indefinitely. There should be a margin of safety at the Power House if anywhere on the campus. Each new building calls for an average of 100 H. P. This fact makes the consideration of the Power House of first importance. To complete the boiler room in the new Power House will cost about \$124,000. To complete the new Power House will cost approximately \$384,000.

The following items are important in the consideration of this most serious situation at the University. There are 37 buildings supplied with light, heat and power, and 6 buildings supplied with light and power. The square feet of radiation is 280,392.

Among other things, the item of steam for dairy work, mechanical laboratories, Home Economics and Chemistry laboratories makes a demand for 180 H. P. The maximum electric load is 480 K. W. The total connected electric load is 1942 K. W. The maximum load of boilers during the cold weather is 2800 H. P.

In order to furnish steam for the above load there are seven boilers, one of which is not in service and has not been for one year due to the fact that judgment of the Trustees favoring a new boiler was set aside by the State Emergency Board and an order issued for rebuilding the old boiler. This rebuilding is not yet complete and will not be for some time since the firm selected by the Emergency Board to rebuild the boiler does not seem able to meet the requirements of the Boiler Insurance Company. The result of the above action and delay has been to put the Boiler House in a critical condition and the service in jeopardy.

Some idea of the service may be realized from the following statistics:

In the old boiler house there are six boilers. No. 1, 500 H. P., ten years old; No. 2, 150 H. P., not now in service being rebuilt as intimated above after nineteen years of service; No. 3, 150 H. P., 24 years in service; No. 4, 450 H. P., 17 years in service. On the last boiler, three 42-inch drums will need to be renewed next spring. The repairs when completed will cost approximately \$10,000. No. 5, 300 H. P., 7 years in service; No. 6, 300 H. P., 7 years in service.



In the new boiler house there is one 600 H. P. boiler, one and a half years in service. The overload in ordinary winter weather is about 14% with all boilers in service. Omitting the one above under repair, the overload under ordinary conditions will be not far from 30%. If one of the large boilers should be out of commission temporarily for any reason the overload would run 40% or more. It will be obvious that under such conditions the adequate equipment of the power house is vital if we are expecting continuous service as an assured fact.

#### *Educational Buildings.*

The following list of buildings for educational purposes is submitted in order that there may be a general view of the enlargement of the plant now in demand and in order that some brief statement can be made concerning each one. It is not possible within these brief statements to make an adequate explanation of the needs for a particular building or to answer the many inquiries naturally arising when a building is proposed. That will be left for later treatment. The order, therefore, in which these buildings are listed has no significance. Each building makes its own direct appeal.

#### PARAGRAPH 3. *The College of Education.*

When the new School Code was passed the place of the College of Education in the preparation of teachers was distinctly recognized by the legislature. Up to this date not one dollar has been expended for buildings or permanent facilities. In this respect the College differs from every other institution engaged in the preparation of teachers. The fact that one hundred teachers were graduated last June and that more than six hundred are at present enrolled justify a consideration of the equipment of the College. Two things are needed: (1) A building adapted to the necessary administration and to the classrooms and laboratories demanded by modern education: (2) Provision for a secondary school adequate to meet the needs of practice and observation work required of all preparing to teach. Satisfactory conditions will not obtain until these provisions are made. Meantime, Ohio teachers are urgent in asking the University to provide itself with modern facilities for the preparation of teachers and the strengthening of the profession in the state. The building plans propose an expenditure of \$478,000.

#### PARAGRAPH 4. *College of Commerce and Journalism.*

During the last General Assembly the Senate passed a bill for a building for this College. This bill was left in committee by the House. The remarkable and unprecedented development of interest in the work of this college is in a measure indicated by the enrollment. At present the department of Economics and Sociology has a registration of more than 4000 and a list of 37 teachers.

The department of Journalism has increased by fifty percent over the enrollment last year. Both of these departments should have the exclusive use and control of certain rooms for laboratory purposes. The



method of instruction in the subjects demands this provision. Such subjects as Accounting, Statistics, Industrial Management, Factory Organization and Management require a special equipment and the exclusive use of the space. The necessity of a wide distribution at present of classes in remote buildings greatly reduces the efficiency. The estimate for the building is \$380,000.

PARAGRAPH 5. *A Hospital for the College of Medicine.*

The College of Medicine depends chiefly for its hospital facilities upon St. Francis Hospital on State Street and Protestant Hospital on Park Street. These facilities are secured under leases transferred from the Starling Medical College and The Ohio Medical University through the Starling-Ohio Medical College when the property of this college was transferred by gift to the Ohio State University. The clinical facilities are neither adequate to the needs nor under the complete control of the University. The development of modern surgery and medicine requires ample facilities. It has been demonstrated that a teaching hospital attached to a medical college is one of the most useful institutions known to modern society.

The expense of the present arrangement amounts to approximately \$25,000. This is the interest at five percent on a half million dollars. Under such conditions the state can hardly justify the present methods longer than the time necessary to remedy them by providing a modern, up-to-date hospital for the college destined to train so many of the surgeons and physicians for the state. The last General Assembly had a bill under consideration but when the building program for the state was abandoned the bill received no further consideration. It should be revived at the coming session. The amount to erect a complete General Hospital as proposed is estimated at \$800,000.

PARAGRAPH 6. *A Building for Agricultural Engineering.*

The request for this building was approved in the early period of the World War and given precedence over the other requests at the time. The war upset the program. Meantime, the development of the tractor as a practical piece of farm machinery has added zest to the request. The building, however, should provide for the exhibit and demonstration of all forms of farm machinery and the teaching of the problem of power on the farm. This demands large space and special construction as well as the exclusive use of the space. Instruction in this important subject for agricultural students will remain unsatisfactory until an adequate building has been provided. The estimate of the building is \$369,600.

PARAGRAPH 7. *College of Engineering.*

FIRST: *The Automotive Laboratory.*

Instruction and investigation in the field here indicated is, of course, relatively new owing to the recent development of the motor car. The older laboratories have not been abandoned nor are they well suited to the



new subject even if they could be abandoned. The rapid development of the industry requires technically trained men for the service as well as a scientific study and investigation of the problems surrounding this new method of transportation. The proposal is to build an addition to the present facilities for Mechanical Engineering at a cost of about \$80,000. To this should be added a modest sum for equipment.

SECOND: *The Wireless Laboratory.*

The department of Electrical Engineering has for some time been engaged in some study and teaching of wireless telegraphy, the work in telephony and calibration. During the war this work was stimulated by the needs of the Federal Government and the teaching of the students in aviation. At that time only temporary provision was possible. The work can not now in justice to the students be abandoned. The time has arrived for a permanent and satisfactory laboratory for this branch of instruction. Special sound proof construction is much needed if the work is to be satisfactory. An addition to Robinson Laboratory is proposed at a cost of approximately \$40,000.

PARAGRAPH 8. *The Horse Building.*

It should be kept in mind that the Board of Health has intimated very plainly to the University that live stock can not be permanently provided for east of the Olentangy River. Other reasons from the University point of view make the transfer of live stock activities highly desirable. The decision has developed a complete plan for all live stock interests west of the Olentangy. The Horse Barn is one unit of this plan. Provision is desired for fifty head of horses. This will provide for four of the leading types of draft horses kept for instruction and breeding and for the requisite number of young colts as well as for the necessary amount of work horses for ordinary farm purposes. The interest in the work done at the University in the Percheron class alone as shown at the State Fair will justify this building. The cost of the completed building is estimated at \$47,000.

PARAGRAPH 9. *Dairy Cattle Building.*

The dairy interests of Ohio rank fourth in the United States. The industry in Ohio is steadily increasing in quantity and in the breeding of dairy herds. The herd at Ohio State can not be brought to meet the needs of students and of the industry, either as to the size of the herd or provision for facilities for pure bred stock until a suitable dairy barn has been provided. The present proposal is another unit in the group of live stock buildings and has been estimated to cost \$85,000. This provision would put Ohio in a position comparable with the other leading dairy states and with the more prominent and active dairy departments in the Agricultural Colleges. Ohio has long delayed this provision. It should be provided at once.



PARAGRAPH 10. *Beef Cattle Building.*

The estimate for this building is \$85,000. The construction and general features would be similar to the Dairy building but the interior plans would be adapted to the needs of this type of cattle. The large and important interests of Ohio in the beef breeds, especially the Short Horn and Aberdeen Angus cattle suggest that the students in Animal Husbandry expect the College of Agriculture to provide at least a standard laboratory in live stock. This applies to both dairy and beef breeds. The College should maintain and breed a limited number of the standard breeds. About one hundred head of the beef breeds are needed to meet the requirements of teaching and breeding and an equal number of the dairy breeds. The physical conditions under which cattle and indeed all live stock should be kept at the University ought to be simple and natural. The buildings, however, must be permanent and of such character as to provide for both teaching the students and the care of the live stock. These buildings, therefore, are a combination of barns, classrooms, laboratories, offices, judging rings and other features made necessary by the popular features of Farmers' Week and other agricultural meetings.

PARAGRAH 11. *The Chemistry Unit.*

The situation in Chemistry is suggested when it is known that the registration last year in this subject was 3043 and is larger for the present year. The Freshman laboratory is the first large problem since all engineering students, all agricultural students, all Home Economics students, all pre-medical students, all Veterinary students and all Pharmacy students are required to take the Elementary Freshman Chemistry. Other Freshmen may elect the subject.

Every possible shift has been made to accommodate the increasing numbers. One wing of the Barracks was converted into a temporary laboratory—a good makeshift but not a satisfactory permanent provision. The advance courses are usually crowded due to the increasing size of the Freshman classes and the rapidly developing interest in the various applications of Chemistry to industry and the increasing numbers going into curricula where Chemistry is necessary.

The following table will show the comparative provision made for students in several universities in the middle west:

UNIVERSITY	BUILDINGS			ENROLLMENT		Floor Space Per Student
	Date Con- structed	Original Cost in Dollars	Floor Space Sq. Ft.	Total	Fresh- man	
Illinois .....	1916	480,200	164,288	3299	1973	49.8
Minnesota .....	1916	405,000	90,000	2095	1650	43.0
Michigan .....	1909	305,000	120,000	3197	1602	37.5
Wisconsin .....	1913	201,754	107,000	2447	1305	43.7
Cincinnati .....	1916	250,000	54,000	960	332	56.2
Ohio State .....	1905	110,367	42,000	3043	2057	13.7



These facts speak for themselves. There should be no hesitation in making at least a standard provision for the Ohio students who are asking the University for the privilege of studying Chemistry. The estimate for the additional unit is \$220,000.

PARAGRAPH 12. *Administration and Recitation Building \$750,000.*

The University began fifty years ago the use of the old original building. It has been remodeled, readjusted and changed from time to time but never provided with adequate facilities for administration as it is now developed. Furthermore, the building itself is not fire proof. It could be readily remodeled and used for perhaps a generation or two generations more for recitation purposes and the chapel could be used for a long time as a room almost constantly in demand.

The necessity of a new building, however, arises out of the fact that the accumulated records and the existing business of the University should be housed in a fireproof building. The financial records and also the academic records of the students, former students and alumni, more than 30,000 in number already, which can never be duplicated, are preserved by the University and their loss would be irreparable. The original building was planned to accommodate about 250 students. It has served its day and generation admirably. At present with more than 7000 students enrolled whose records must be kept, whose fees must be received, the building lacks space and every modern facility for doing business. The result is that much of the administration has been scattered over the campus at an economic loss and at great inconvenience. Space never increases but service is constantly demanding attention and space. The provision, therefore, of a modern and adequate building for administration with some provision for one or two departments in instruction and a suitable auditorium would, in the judgment of the Trustees, be a most valuable addition to the efficiency of the University. The erection of this new building and the transformation of the old building into recitation purposes would, for some years at least, relieve the necessity of an adequate building while providing the much desired administration facilities.

The development of the University in attendance has increased the requirements for accommodating audiences of different sizes. Frequently three or four auditoriums are in demand at the same hour. This demand comes not alone from students and campus organizations but from conventions of educators, attendance at the Farmers' Week and other similar organizations. There is no place on the campus now where more than one-seventh of the students can be assembled. The chapel being the largest will accommodate comfortably about one thousand. The auditorium in the Home Economics Building will accommodate about two hundred and fifty. This is the limit of facilities now provided. There ought to be, in order to meet urgent necessity, three or four auditoriums of moderate size and every important building now erected should include



within its plan one of these moderate sized auditoriums. The University ought to have an auditorium that would provide for at least three-fourths of the students and Faculty at one time. The stressing necessity of other facilities has caused the Trustees to hesitate in asking for this large provision of an auditorium, and, therefore, it is not included in these requests. Other institutions have frequently had at their early existence provision for assembly rooms and dormitories. Ohio State University has started on the theory that the teaching facilities should take precedence. The rapid development of the student roll, however, has rendered this difficult and made these other desirable facilities, up to this date, impossible.

PARAGRAPH 13. *Dormitories.*

It will be recalled that the question of dormitories has frequently been before the governor of the state and individual members of the legislature. A considerable amount of public sentiment has urged the provision of dormitories. The Trustees have not concurred in this movement for the reason suggested above, namely: that the teaching facilities were most imperative in a state university. There is, however, no just argument against the provision of dormitories for young men and young women. The experience with Oxley Hall, providing for only sixty girls out of an enrollment of about eighteen hundred and erected in 1908, has been that since its erection the state has not been called upon for one dollar for its maintenance or improvements. In addition to this fact it has been a regulating factor in fixing the prices of rooms and boarding for young women. There is no doubt that dormitory facilities for young men and young women would involve only the initial expense of construction. They would carry themselves financially from the time of occupancy. They would also serve as an effective check on the constant tendency to advance prices both for room rent and for boarding. At present the students are largely in the hand of the community within reasonable distance of the campus. Dormitories would be an economic factor in determining prices and in stabilizing facilities as well as standardizing the character of the facilities provided and offered for students. Such a provision should be regarded as an investment and not as a current expense. In view of the urgent demand for other facilities, the Trustees have declined at present to make request of the legislature for dormitories.

PARAGRAPH 14. *Remodeling of Buildings.*

This is an item in itself somewhat different in character from the ordinary repair and betterment of buildings. When the Women's Building shall have been completed the question of remodeling the Gymnasium will be at once urgent. The Women's Building will provide gymnasium facilities for the young women. The original Gymnasium, constructed in 1898 with a view of accommodating about 1100 students, will then be remodeled for the use of the young men. For some time this needed

change has been under consideration and its advantages are obvious to all who know of the crowded condition of the building.

The provision for the agricultural live stock building on the west side of the Olentangy River will make available the present horse barn, cattle barn and judging pavilion which fortunately were so constructed that they can be readily transformed into first-class buildings for agricultural and other teaching.

The construction of the Chemistry Building for which appropriation has been made will offer opportunity for an additional story on the present Chemistry Building. This will add facilities at a very low cost and bring the front of the building to the same architectural features as have been developed in the wing.

The construction of any new building and the abandonment of it for the purposes hitherto used renders the question of remodeling always important if we are to continue to use buildings already constructed. Such remodeling has taken place in the past by special appropriations. The history of almost every building on the campus is that it has been used for a great variety of purposes not anticipated at the time it was constructed. The highest utility, therefore, of existing buildings demands that they be remodeled to conform to the new plans adopted upon the construction of additional buildings.

This request for \$300,000 will provide a large amount of facilities at the lowest possible cost, and will make available, as soon as completed, five serviceable buildings well located on the center of the campus.

#### CONCLUSION

The building program as outlined above may at first seem alarmingly large. Further reflection or an investigation will dispel that fear. The State of Ohio has not indulged in extravagance in the erection of buildings at the University. The most expensive, and indeed the only expensive building, is the library erected at the cost of just below the appropriation of a quarter of a million dollars. The buildings will impress anyone as substantial and well adapted to their uses. It should be said, however, that not a single building on the campus, save the Law building, has proved equal to the demands made on it three years after its construction. No one has had foresight to plan adequately. The funds available have not been sufficient to encourage such planning. Not a single proposal for the education of the youth of the state has been made that has not promptly attracted students. Indeed the demand has usually preceded the supply. The Trustees are, therefore, presenting a program already held in abeyance too long and which should be put into effect if the facilities of the University are to correspond to the needs of the students and to render the most effective work by the faculty possible.



## THE PURCHASE OF LAND

Part of the plan of river improvement involves the control of the Olentangy River from the Lane Avenue bridge to the King Avenue bridge, a distance of approximately one and a half miles. Already the University controls, by purchase, all of the eastern side and practically all of the western bank. It is highly desirable that this control be continued on the side next to the river. This is one of the factors that will eventually make that portion of the University farm one of the attractive features of the University and of the state.

There is no desire to buy land indefinitely but there is a very well settled conviction that certain adjacent real estate if purchased now would add greatly to the efficiency of the University and round out its boundary lines in such way as to make the University estate for all time an attractive property. It is hoped, therefore, that the legislature will put at the command of the Trustees the reasonable sum of \$50,000 for the purchase of such land as may be available within the next biennium.

## SPECIAL EQUIPMENT

The general character of the improvements in the region of the bridge and the stadium has determined the request for the four items of a floating dredge, a dinkey locomotive, dump cars and rails and is based upon the necessity of river improvement accessory to building the bridge, the dikes to protect the stadium field and for the general protection of the river bottom land. This work cannot be done by contractors except at the convenience of the labor market and subject to the factors of uncertainty quite out of their control. On the other hand the University can readily employ the necessary supervision and abundance of prison labor. These two factors will enable the University to have control of the situation at the season when this work can be done at the greatest advantage and the lowest cost. Experience has proved that University control in all such campus improvements have been both efficient and economical. Moreover, such control provides an important protection to property interests. The investment will pay for itself in the further development of the river front in the future.

## PERSONAL SERVICE

The situation at Ohio State University is not essentially different from that at other important universities in the country. They are all running beyond the schedule anticipated. Appointments made on the basis of anticipated attendance are quite outrun by the actual enrollment. Instead of five thousand students as a year ago we now have seven thousand. This makes a demand for additional teachers or a reduction in the quality of the instruction.

Since the budget for the current year was adopted in May, 1920, and prior to the opening of the University in September, 42 resignations have taken place in the instructional force. This shows a very rapid turnover



in the teaching force and is due to several factors; first, the fact of supply and demand rising out of the similar crowded conditions of colleges and universities elsewhere; second, the unusual demand at increased salaries for teachers in certain of the newer forms of education; and, third, the commercial demands for men with technical education. All these and other factors in the case have tended to unsettle the stability of the teaching force and insofar to render the work unsatisfactory. These resignations cited above made it necessary for the University to fill the vacancies at once. Experienced teachers are not always available for such vacancies. The result is loss in the exchange and perhaps a higher salary relatively if not absolutely, than was paid to the tried and tested teacher. The demand on the part of the students for at least standard instruction and their right to demand it presents to the University management a serious problem. The fact that the University has far exceeded the anticipated attendance thus requiring additions to the teaching staff has made the situation so acute that a considerable increase in revenue for salaries is imperative if we are to provide for the next biennium on the basis of the present attendance not to say anything about the probable further increase in the enrollment. The Ohio State University has been confronted with the same situation in this particular as other important universities and, therefore, presents part of the nation-wide problem of providing for the needs of the students. This demand from the people is the logical result of our educational policy and can not be ignored. It is not a temporary condition. The development of our High Schools has stimulated the communities until now Ohio graduates approximately twenty thousand annually. This number is liable to increase. The result is that increasing numbers apply to the University for education. The state can not well turn a deaf ear to this call or compromise by denying to her own sons and daughters the requisite number of adequately paid teachers. The requests made in this item are not only reasonable but are believed to be below what the actual attendance will demand before another General Assembly will meet.

In the matter of the increase of salaries for those whose pay is inadequate, nothing need be said except that the high range of prices superseding a long underpaid experience makes the appeal for reasonable provision both just and imperative.

#### MAINTENANCE

Under the subdivision of this topic are supplies, materials, replacement, equipment, contracts and open order service. Practically all of these items are automatically increased in cost and are entirely outside of the control or command of the University. Food supplies, fuel supplies, building materials, general laboratory equipment, express, freight and general repairs, are a few of the items listed under this general heading. The University can not operate with an increasing student roll and a static condition as to the funds for its maintenance. Increased supplies



are essential to the operation. This increase of supplies carries with it automatically an increased cost. The University is in no sense a money-making institution and must, therefore, submit to the market conditions controlling everything to be purchased. The estimates for these items have been made with care, comparing our experiences in the past years and are distinctly below what may be termed an adequate provision for the attendance that may be reasonably expected. The administration is using every possible effort to secure economy of consumption and the limitation of purchases to the minimum requirements consistent with efficiency. The purchases are authorized regularly from month to month after careful inquiry and reports from the departments and colleges making request.

These purchases are under the control of a special committee on appropriation whose duty it is not only to meet from time to time but to keep in view the needs of the entire university and to so distribute the appropriations as to provide the greatest possible efficiency and the wisest distribution of funds. It is believed that the General Assembly will not contemplate a reduction of efficiency by failing to make an adequate increase in the appropriation for the ordinary maintenance of the University.

#### THE FOURTH QUARTER PLAN

For some years the proposal to put the University on a Fourth Quarter Plan, thus operating practically a continuous year, has been under consideration. The Faculty have endorsed the movement and later the Board of Trustees. This method has already been adopted by some state universities modeled somewhat after the plan of the University of Chicago. The Fourth Quarter Plan provides practically a continuous opportunity for education. This does not mean, however, that all persons must go to school continuously but only that the opportunity is continuous. It will provide for a distribution of attendance so that students may, health and means permitting, go steadily through college and save some time. There are many such people. On the other hand, students may divide their time to better advantage if they desire. This applies especially to students who desire to earn money for a longer period than a single vacation provides, or for persons who, through illness or other reasons, are out of college for an extended period. Furthermore, the long vacation is a tradition not founded in reason or sound principle but in the convenience of a primitive condition where education was an incident in the winter period when nothing else could be done. At present education is the great business of the family and of the community and should command the best portion of the year. It is the only really great enterprise that finds itself hampered by losing practically one half of the year. The longest school year in the public schools is ten months of twenty days each or two hundred days. The college and university period is theoretically about thirty-six weeks of one



hundred and eighty days. As a matter of fact, counting out holidays and other interruptions, they operate less than one half of a calendar year. It should not be overlooked, therefore, that the plant in a large institution must provide practically continuous service. Ohio now has a university with a plant estimated at about \$10,000,000. Sound economy requires that an expensive and elaborate plant of this sort should be organized into action as much as possible and make its facilities available for as much of the year as is practicable. The small additional outlay necessary to keep the plant going is so negligible a portion of the entire budget and the advantages of continuous operation are so great as to render this question most important if we are to consider the economies of education. The plan as proposed elsewhere is an academic year of about forty-eight weeks divided into four quarters. The budget is presented with a view of beginning this greater utilization of the plant with July 1, 1921.

#### THE PRESIDENT'S ABSENCE

During the year the President of the University, upon request of the Trustees, accepted an appointment by the President of the United States to serve on the Industrial Commission which met in Washington December 1, 1919, and continued in session, with one or two short intervals, until April, 1920. During this period, Judge John Jay Adams, Dean of the College of Law, served as acting president. The service on the Industrial Conference was purely an honorary service and a report was submitted under date of March 6, 1920. The effort was to set out some principles and to make provision for some organization that would lead toward a stabilizing of industrial conditions by providing principles to guide any action and the means of affecting conciliation where differences arose. The commission was not authorized by an act of Congress but was called into existence through an executive action based upon suggestions and recommendations made that such conference would be of public service. It is gratifying to note that the report has been received throughout the country with considerable favor and that the principles announced therein have already had considerable attention at the hands of legislators.

This report, like all other annual reports, can at most suggest the outlines of the work and needs of the University. A formal report always fails to portray the tremendous human interest centered in the activities of a university. Familiarity with the everyday occurrences on the campus and with the serious efforts made both by students and faculty will promptly persuade an open mind that here is found the most abiding influence anywhere maintained for the perpetuity of the state. Superficial enthusiasm is readily aroused over buildings, pay rolls and the material phases of university life. The abiding and deep seated enthusiasms are aroused, however, only when the discriminating judgment discloses the



vital importance of the intellectual, moral and social ideals constantly emphasized to the minds of students and faculty. The idealism of a university expressed in its attitude toward public service is not the least among the assets of the state. It is gratifying to record that the year now closed has borne abundant testimony to the unselfish spirit of the faculty and the loyal devotion of the students.

For all the hearty cooperation of the administrative and executive officers and the continued support of the faculty due appreciation is herewith recorded.

The usual financial and statistical reports required by law are transmitted herewith as part of the Annual Report of the Board of Trustees.

Respectfully submitted,

W. O. THOMPSON,  
*President.*

## REPORT OF THE DEAN OF THE COLLEGE OF AGRICULTURE

*President W. O. THOMPSON, Ohio State University.*

DEAR SIR:—I have the honor to present to the President and Board of Trustees the annual report from the College of Agriculture for the year ending June 30, 1920.

I have the honor also to transmit herewith reports of the various departments of the College of Agriculture for the year ending June 30, 1920. I am forwarding herewith these reports to you in the exact form in which they were presented to me.

The past year has been, on the whole, a rather successful one. In spite of our fears to the contrary, the enrollment in this College for the current year has greatly exceeded that of last year. Our enrollment in fact has been within two hundred of the largest pre-war registration. There is every indication that another year will bring our enrollment up to that of 1916-1917. This large increase in enrollment introduced some teaching difficulties. A considerable number of our teaching staff were released during the period of the war and did not return so that in spite of our large enrollment, our teaching staff has been below that of the years immediately preceding the war. I am sorry to note that the new budget does not take this fact into account and that we must go into the next year with a smaller teaching staff than we had in 1916.

In addition to the regular teaching activities of the College, we have given a special course for the soldiers who are being rehabilitated under the auspices of the Federal Board for Vocational Education. This course began on March 15th and will continue until the middle of August. About fifty students have been registered in this work.

I feel that more attention has been paid to the improvement of teaching in the College during the past year than has been customary in the past. There has been a notable improvement of courses in some of the departments and a very manifest interest on the part of many members of the faculty in making the teaching work more effective. Our plans for the coming year include some very definite features which we hope will make for the improvement of the resident teaching.

The University farm had had a rather successful season although we have been severely handicapped throughout the year with lack of labor and equipment. For the first time the farm has been able to produce all of the hay and other forage required by the various departments of the University. This has not only been a matter of saving to the University but a great convenience since hay and forage are the most difficult things to buy on the local market. The drainage of the farm has been proceeding slowly since we have been handicapped by lack of labor and by insufficient money for the purchase of tile. The drainage on the Kautz tract, which



has been assigned to the Department of Farm Crops, was completed last fall. The farm should be completely fenced; sheds should be erected for the storage of the implements; and more modern and effective machinery should be provided at the earliest possible date. We are now using farm machinery which is antiquated and are subject to popular criticism because of that fact. The kind of machinery which we have on the farm calls for too large a use of man power in spite of the fact that we are continually teaching in the classroom that man power should be conserved by the use of large machinery, and more horses or other power units per man. You will remember that I asked for a considerable appropriation for the purchase of machinery and to completely fence and drain the farm but that this request was not included in the budget granted by the last legislature.

I beg to call your attention to the fact that not only the Division of Farm Operations but that all of the departments of the College are handicapped for equipment. Several departments of this College could use to advantage the entire sum now in the equipment budget for the whole University. We are also severely handicapped by lack of room. The buildings assigned to the College of Agriculture are all over-crowded and it is necessary that we should at the earliest possible date proceed on and elaborate building program if this College of Agriculture is to maintain its place among the outstanding colleges of the country.

The College has been able to make some progress in research during the past year. The Department of Agricultural Chemistry and Soils now has the plot work on the Sells tract well under way and is carrying on a number of interesting research projects in the Laboratory. The Department of Farm Crops has established some interesting investigational work on its plots on the Kautz tract in addition to the work in the plant breeding which is now being carried on to the west of the University Hospital. The Department of Rural Economics has in operation some interesting investigations conducted cooperatively with the U. S. Bureau of Markets and Bureau of Farm Management in addition to some work which is being maintained in cooperation with the Ohio Experiment Station. The Departments of Botany and Zoology also report valuable research projects in progress as a number of such projects which have been completed during this year. All of this research work, however, has been conducted under considerable difficulty, both because of lack of funds, and because of the fact that the staff is carrying too heavy a teaching load to permit of any large amount of research. I must emphasize again, as I have repeatedly in the past, the fact that the success of the College of Agriculture will depend largely upon providing facilities for research. Several men whom we have desired to add to our staff, have during the last few years, declined our invitation for no other reason than the fact that we do not have an Experiment Station in connection with this College and that they

were afraid under our organization they would not have adequate facilities for research.

It will be seen therefore that the lack of an Experiment Station stands in the way of our adding the right type of men to our staff, and it is equally true that the research opportunities offered by other institutions have been responsible for the loss of a number of our outstanding men during the past year. I trust that your requests from the next legislature may include a reasonable amount for the encouragement of research.

Respectfully submitted,

ALFRED VIVIAN,  
*Dean.*

---

*Note:*—The Department reports presented to the Dean of the College of Agriculture have been reduced in quantity and are presented as abstracts.

W. O. THOMPSON



# REPORT OF THE DEPARTMENT OF AGRICULTURAL CHEMISTRY AND SOILS

## AGRICULTURAL CHEMISTRY DIVISION

Dean ALFRED VIVIAN.

DEAR SIR:—I respectfully submit the following annual report for the Agricultural Chemistry and Soils for the year 1919-1920:

### A. Agricultural Chemistry.

#### TEACHING ACTIVITIES

SUBJECT OF COURSE	FIRST SEMESTER			SECOND SEMESTER		
	Number of Courses	Number Enrolled in Courses	Instructor	Number of Courses	Number Enrolled in Courses	Instructor
General Agriculture Chemistry....	103	150	Phillips	...	...	.....
General Agriculture Chemistry....	115	4	{ Bliss Thrash }	...	...	.....
Dairy Chemistry.....	107	14	{ Lyman Almy }	108	11	{ Lyman Almy }
Chemistry of Animal Nutrition...	111	11	Lyman	112	7	Lyman
Nutrition.....	...	...	.....	116	2	Phillips
Plant Chemistry.....	...	...	.....	114	4	Phillips
Food Analysis.....	121	9	{ Lyman Almy }	122	7	{ Almy Lyman }
Household Chemistry.....	124	49	{ Lyman Edgar }	123	65	{ Lyman Edgar }
Chemistry Food and Nutrition....	125	12	Lyman	125	9	Lyman
Research.....	201	1	Lyman	202	1	Lyman
Applications of Chemistry.....	51	117	Watson	52	135	Watson

During the year a total of 668 students were enrolled in the courses of the Division. This is an increase of about 300 percent over last year. The most striking increase is to be seen in the enrollment in Elementary Chemistry in the Three-Year Course in Agriculture. About one-half of these students, however, were vocational students sent here by the United States Government and represent a part of the program of educating returned soldiers. It is not expected that the number in this course next year will be as large as it has been.

A total of 88 advanced and graduate students were enrolled in our advance elective courses.

During the first semester we accommodated the Department of Chemistry by giving them laboratory space for about 90 pre-medical students studying organic chemistry.

## PUBLICATIONS

Chemical and Physical Changes during Geotropic Response, Botanical Gazette, Vol. 69, 168-178, 1920 ..... T. G. Phillips

The Effect of High Protein Acid-Producing Diets on the Excretion of Ammonia by Rabbits, Journal of Biological Chemistry, Vol. 39, 339-346, 1919 ..... J. F. Lyman.  
(in collaboration with Bernard Raymond.)

Milk: Its Importance as Food, Extension Bulletin Vol. 15, No. 3, 1919-1920. 19 pages, Ohio State University ..... J. F. Lyman.

Some Studies on the Nutritive Value of the Soy Bean in the Human Diet. N. Dakota Agr. Exp. Sta., Special Bulletin Vol. 5, No. 13, 1919. .... W. G. Bowers.  
(Work done under direction of Mr. Lyman.)

Respectfully submitted,

J. F. LYMAN,  
*In Charge of the Division.*



## B. REPORT OF SOILS DIVISION

The teaching work of the Division of Soils has returned to practically the pre-war basis and the attendance in the course in 1919-20 was again quite large.

## TEACHING ACTIVITIES

SUBJECT OF COURSE	FIRST SEMESTER			SECOND SEMESTER		
	Number of Course	No. of Students Enrolled	Instructor	Number of Course	No. of Students Enrolled	Instructor
Winter Course .....	.....	101	{ Bear Vivian }	.....	.....	.....
Elementary Soils .....	53	49	Bear	54	47	Bear
Elementary Soils.....	.....	.....	.....	152	151	{ Entire teaching staff.
Soil Fertility.....	153	21	Bear	154	17	Bear
Chemical Analysis .....	155	5	McClure	156	4	McClure
Origin and Classification .....	157	4	Conrey	.....	.....	.....
Chemistry of Fertilizers .....	161	2	McClure	162	1	McClure
Research .....	201	7	Bear	202	6	Bear
Seminary .....	203	7	Bear	204	4	Bear

During the year a total of 426 students were enrolled in the courses of the Division. Four men completed the requirements for Masters' Degrees. They were, Guy Dowdy, S. F. Hinkle, Charles Thrash and Clarence Underwood.

## RESEARCH

The project on "Sampling of Soil Plots" was completed and the work was reported in Soil Science, Vol. 9, No. 1, pp. 65-75.

## EXTENSION SERVICE

The usual amount of extension service was rendered as given in special detailed report filed with the Director of Extension. Particular mention is made here of Schools for Fertilizer agents, Limestone Storage Bins and Permanent Demonstration Fields which represent some of the newer phases of the work under way. Especial attention is also called to the most excellent service rendered by our Soils Research Laboratory under the direction of Mr. McClure and Mr. Valley in research and extension problems.

## PUBLICATIONS

## Soil Science—

January, 1920—Sampling Soil Plots.... Firman E. Bear and George McClure.

## Timely Soil Topics—

July, 1919—Fertility Standards.....M. A. Bachtell  
 August, 1919—How much Limestone?.....J. F. Barker  
 September, 1919—Drainage.....F. E. Bear  
 October, 1919—The systematic Saving of Manure .....R. B. Dustman  
 November, 1919—Fall Plowing.....R. B. Dustman

December, 1919—Inoculation of Soy Beans .....	F. E. Bear
January, 1920—Meadow Fertility .....	M. A. Bachtell
February, 1920—The Potash Situation .....	F. E. Bear
March, 1920—Acid Phosphate .....	F. E. Bear
April, 1920—Soil Fertility for the Home Vegetable Garden .....	L. M. Montgomery, Dept. of Horticulture
May, 1920—Corn and Soy Beans .....	M. A. Bachtell
June, 1920—Cultivation for Corn .....	E. E. Barnes
Ohio Farmer—	
August 30, 1919—The Articles of Our Faith in Limestone .....	F. E. Bear
November 29, 1919—Tile Drainage an Asset .....	F. E. Bear
March, 1920—The Growing Importance of Fertilizers .....	F. E. Bear
Ohio Experiment Sta. Monthly Bulletin—	
1919—Availability of the Nitrogen in Garbage Tankage .....	F. E. Bear and George Valley
The Agricultural Student—	
January, 1920—The Art of Growing Crops .....	F. E. Bear
The West Virginia Agriculturist—	
May, 1920—Holding Back the Soil .....	F. E. Bear
The Fertilizer Green Book—	
January, 1920—Growing Importance of Fertilizers .....	F. E. Bear

Respectfully submitted,

FIRMAN E. BEAR,  
*In Charge of the Division.*



## REPORT OF THE DEPARTMENT OF AGRICULTURAL EDUCATION

*Dean* ALFRED VIVIAN.

DEAR SIR:—I respectfully submit the following annual report of the Department of Agricultural Education for the year 1919-1920:

The department has completed a much larger work than that of the preceding year, particularly in the field of teacher training and the improvement of teachers in service. Two instructors were added to the department and placed in charge of training schools. Mr. Nisonger at Grove City and Mr. Lane at Hamilton Township and a third instructor, Mr. Kenestrick, gave full time to the improvement of teachers in service with some assignments to supervision duties. Mr. Fife assumed his duties as assistant supervisor upon completion of his summer term at Cornell University and has been especially helpful in improving the work in the departments over the state by bringing into the department experience of several years as district superintendent and an acquaintance over the state based upon two years as assistant leader of Boys' and Girls' Club Work.

### TEACHING ACTIVITIES

SUBJECT OF COURSE	FIRST SEMESTER			SECOND SEMESTER		
	Number of Courses	Enrollment	Teacher	Number of Course	Enrollment	Teacher
Methods of Teaching Vocational Agriculture .....	101	7	Stewart	101	7	Stewart
Observation Teaching .....	103	11	Johnson	103	1	Johnson
Practice Teaching ... ..	104	6	Johnson	104	8	Johnson

Enrollment in summer session, Methods of Teaching Vocational Agriculture, by Stewart, 20.

No changes have been made in the curriculum.

### SUPERVISION

About thirty high schools have applied for departments of Vocational Agriculture and all but five or six of these have been inspected for the purpose of considering their applications. From this number ten of twelve have been recommended as satisfactory centers for the instruction of Vocational Agriculture, except for the fact that in some instances one or more departments have already been approved in the same county.

The development of the work in the training schools has made favorable progress. During the fall months conferences of the instructors

were held bi-weekly for the purpose of developing satisfactory courses for the teaching of Animal Husbandry and improving the course in Farm Crops. Especial attention had been given to the development of lesson plans for vocational classes with their adaptation to local conditions. The home project or supervised farm practice has received attention as to organization and supervision. Each of the training teachers, except Mr. Lane, was relieved for one week by Mr. Kenestrick during which they visited several departments in the state for the purpose of observing the work in operation and discussing with the teachers problems and phases of interest.

A short winter course was conducted in connection with the work at Grove City with favorable results.

The work in fifty-seven other departments over the state has been supervised more carefully than previously, due to an increase in available assistants. All departments over the state have been visited from one to five times, with especial assistance given the weaker teachers. Mr. Fife has usually given four days a week to supervisory duties. Mr. Stewart has given two days a week, approximately one-half of the time, and Mr. Kenestrick has given irregular assistance in this phase of the work.

The training of teachers in service has been conducted with the assistance of Mr. Kenestrick, who has relieved twelve men for a week of intensive training in the training schools for either directed observation or supervised teaching. In addition to this he has worked with seven men two to four days and has thus given them such assistance as was available from personal contact.

District conferences were held during the late winter and early spring in ten different groups. Most groups were attended by six or eight teachers, although in the south-eastern section of the state smaller units were necessary. Each conference convened for two days and was directed by two members of the department. The program of intensive training offered in these conferences dealt with the vocational lesson plan, the organization of subject matter in Animal Husbandry, Dairying and Soils, and Engineering Management and the improvement of project organization and supervision, with opportunities for the usual round-table discussions of the problems of the individual teachers.

At the regular meetings of the Ohio State Teachers Association at Columbus and Cedar Point, sectional conferences were held. On these programs, in addition to assigned topics for discussion by vocational teachers, speakers from outside the state appeared. At the Columbus meeting Prof. James of Wisconsin and Prof. Works, of Cornell, each gave two interesting addresses. At the Cedar Point conference, regional director, Mr. J. A. Linke, reviewed the work in this region.

The Monthly News Letter has been prepared more or less regularly. It has been the means of transmitting to the teachers suggestion and help for the improvement of their work.



In other Ohio Schools interest is increasing, although slowly, in organizing departments without federal-state aid. If funds were available from taxation it is probable that other schools would improve the quality of their agricultural instruction. For the coming year five additional departments have been approved bringing the total up to seventy. It is possible that one or two of the older departments may discontinue the work for a year or two due to the small enrollment of vocational pupils in their departments.

PUBLICATIONS AND ADDRESSES BY MEMBERS OF  
THE DEPARTMENT

Bulletin No. 1—

"Rooms for a Department of Vocational Agriculture—their Location,  
Plan, and Equipment".....Mr. Stewart and Mr. Johnson.

Bulletin No. 2—

"Seasonal Outline for the presentation of Farm Crops and Horticulture"  
.....Mr. Johnson.

Bulletin No. 3—

"Vocational Agriculture in the High School," a bulletin of general  
information. (now in press) ..... Mr. Stewart.

Project Record Book, (now in press)—

The Department of Agricultural Education.

Publications now being prepared—

"The Organization of Farm Shop Courses" ..... Mr. Fife.

"The Organization of a Course in Animal Husbandry, in Dairying and  
Soils and in Engineering and Management" .....  
.....Mr. Nisonger and Mr. Kenestrick.

The department has been represented on various programs as follows:

Northeastern O. S. T. A. Cleveland..... Mr. Stewart.

Association for the Advancement of Agricultural Teaching, Chicago,  
..... Mr. Stewart.

The paper presented was "The Plan for the Training of Teachers and the  
Improvement of Teachers in Service" which was reprinted by the  
U. S. Commissioner of Education.

National Association for Vocational Education..... Messrs. Johnson and Fife.

Central Regional Conference of Supervisors and Teacher Training  
Staffs..... Messrs. Stewart, Fife and Nisonger.

Respectfully submitted,

W. F. STEWART,  
*In Charge of the Department.*

## REPORT OF THE DEPARTMENT OF AGRICULTURAL ENGINEERING

*Dean* ALFRED VIVIAN.

DEAR SIR:—I respectfully submit the following annual report of the Department of Agricultural Engineering for the year, 1919-1920:

During the year 1919-1920 changes in the Departmental staff, lack of laboratory facilities, lack of heat in the Implement Building which caused damage to equipment and made work impossible at times, and a large increase in the number of students in advanced studies all tended to hinder the work of the department.

Nevertheless, the work has progressed in a gratifying manner. The students have been interested in their work as never before. Part of this interest is no doubt due to the maturity of the men, many of whom served overseas during the war or were in military service otherwise. The increased interest in machinery for increasing food production, of drainage of farm lands to increase productivity, and of more economical methods of building has also been a decided factor in the new show of interest.

On January 1, 1920, Professor H. C. Ramsower, then head of this department and first instructor in agricultural engineering at Ohio State University, resigned to become Director of Extension Service, Ohio State University. This is a well merited promotion and we congratulate the Extension Service on securing so able and sympathetic a leader.

Mr. J. B. Green was transferred from the Extension Service to the department as Assistant Professor, Feb. 1, 1920. He will be in charge of the subject of field machinery formerly given by Professor Ramsower.

To take the place of Mr. Green as Extension Specialist in Agricultural Engineering, we have secured the services of Mr. Robert R. Thompson, an alumnus of this College and former student in Engineering at the University of Cincinnati. Mr. Thompson has managed his father's farm since graduation until his present appointment. He has taken hold of the work with great zeal and enthusiasm.

Mr. Overholt, Mr. Pettit, and Mr. Fish returned to the department early in the summer of 1919, after various terms of service in the United States Army.



## TEACHING ACTIVITIES

SUBJECT OF COURSE	FIRST SEMESTER			SECOND SEMESTER		
	No. of Course	No. Enrolled	Instructor	No. of Course	No. Enrolled	Instructor
Farm Engineering.. . . . .	101	44	{ R'm's'wer Ives McCuen Potter }	101	75	{ Ives McCuen Potter Green }
Farm Structures . . . . .	103	25	Potter	106	28	{ Potter Ives }
Drainage . . . . .	106	4	Potter	107	47	{ McCuen Ives Potter }
Farm Power . . . . .	110	17	McCuen	108	10	{ Ives Potter }
Concrete Construction . . . . .	111	9	{ All instruc- tors }	112	12	{ All instruc- tors }
Special Problems . . . . .	111	9	{ All instruc- tors }	112	12	{ All instruc- tors }
Design of Dairy Buildings . . . . .	114	98	Ives	114	(Not given 1920)	Ives
Farm Structures . . . . .	51	67	Potter	51	98	Ives
Farm Machinery . . . . .	52	28	Potter	52	61	Green
Concrete Construction . . . . .	53	6	Potter	53	28	Potter
Farm Power . . . . .	54	11	McCuen	54	11	McCuen
Farm Machinery (8 weeks Course) . . . . .	88	88	Green	88	88	Green
Farm Structures (Vocational Board) . . . . .	51	14	Ives	51	14	Ives
Farm Machinery (Vocational Board) . . . . .	52	34	Green	52	34	Green

During the year a total of 706 students were enrolled in the courses of this department. There was a decided increase in the number of men majoring in agricultural engineering, and there are prospects that there will be a further increase. There is a demand for graduate work in this department, as well as a demand for further work. Many students have requested or suggested the possibility of a combined Agriculture-Engineering course.

New courses adopted and approved for the year 1920-1921 are as follows:

115. Household Mechanics. Two credit hours.
116. Household Equipment. Three credit hours.  
These courses are designed for Home Economics students.
117. Dairy Mechanics. One credit hour.  
For students majoring in Dairying.
118. Field Machinery. Three credit hours.  
For advanced students majoring in Agricultural Engineering.

## DRAINAGE

Under the direction of the Department, several advanced students have worked out comprehensive data on two large farms, which will lead to the installation of large drainage systems which will be observed for data. During the coming summer, two further projects will be started.

## FARM BUILDINGS

A rather complete study has been made of comparative costs of different types of construction as applied to a standard type of general farm barn. The five types studied will be available soon, in the form of stock plans, for distribution through Extension Service. Cost data has been based on present labor and material prices.

## EXTENSION SERVICE

The efforts in extension activities have been confined largely to drainage demonstrations. The tractor demonstration held during the summer of 1919 and the tractor tests in January, 1920, were of no small value both to the farmer and to the manufacturer. Farm building work has been limited on account of present prevailing high rates for materials and labor. In spite of this, 933 stock plans and 199 special plans have been issued on request from farmers through county agents. This is an increase over the total for the previous year of 388. In cooperation with the New York Central Railway Lines a Home Convenience Special made 72 stops in Ohio and an estimate based on enrollment indicates that about 20,000 persons saw the demonstration or heard the lectures in connection.

## TRACTOR INVESTIGATION

By continuing the tractor tests started in 1917, and by improved methods of taking data, much valuable information has been secured as to tractor performance both in the field and in the belt. The Gulley dynamometer, the best of its kind, purchased in July, 1919, has had a thorough test and, while it is not perfect, has been the means of securing much better results than heretofore. The data assembled and analyzed will soon be available for publication as a University bulletin.

A more detailed report of the above activities is filed with the Director of Extension.

## PUBLICATIONS

Publications and articles were written by the following members of the department:

Agricultural Engineering Editor, Farm and Fireside; Consulting Agricultural Engineer for Ohio Farmer. Ten headline articles were written for these publications and about 500 technical answers to inquiries were made, many of the answers being published. .... F. W. Ives

"Ohio Farmers' Week Tractor Tests," Ohio Farmer, February, 1920. Consulting Agricultural Engineer, Ohio Farmer. Many technical answers to inquiries relative to farm power were made, all of which have been published. .... G. W. McCuen.

Consulting Agricultural Engineer, Ohio Farmer. Many technical answers to queries relative to drainage and household engineering were made through the columns of the Ohio Farmer. Four leading articles in Ohio Farmer on subjects "Household Power," "Drainage," etc. .... P. B. Potter.



"Belting," for Sampson Tractor Bulletin, October, 1919. "Ohio State Tractor Tests," Farm Implement News, February, 1920. "What Tractor Tests Mean to Manufacturers," Tractor and Trailer, April, 1920. "Harvesting Hints," Farm and Fireside, April, 1920. "Farm Lighting Problems," Farm and Fireside, May, 1920. "Haying," Better Farming, June, 1920.  
.....J. B. Green.

Respectfully submitted,

F. W. IVES,  
*Head of Department.*

REPORT OF THE DEPARTMENT OF  
ANIMAL HUSBANDRY.

*Dean* ALFRED VIVIAN.

DEAR SIR:—I respectfully submit the following annual report of the Department of Animal Husbandry for the year 1919-1920:

The work of the year 1919-1920 has been one of great activity, notwithstanding the fact that the material progress desired has not been accomplished.

During the year 1919-1920, no changes have taken place in the regular teaching staff in the University. In the Extension Service, however, important changes have occurred. Prof. B. L. Thompson resigned March first to engage in practical farming. His successor has not been appointed. Mr. H. D. Munroe resigned June first to accept a similar position at Pennsylvania State College. Prof. Wuichet also gave notice that he would sever his relations with the University at the end of the year in order to engage in other business. At the request of the writer, the trustees have relieved him of all executive work and the supervision of the Department of Animal Husbandry and Dr. Carl W. Gay, a graduate of the New York State Veterinary College and Iowa State College, has been appointed his successor, commencing with July, 1920. Dr. Gay was an Assistant Professor in this Department from 1905 to 1907. From 1907 until 1918 he was in charge of the Department of Animal Husbandry of Pennsylvania University, from which institution he was called to Minnesota University to become head of the Animal Industry Division of that University. Dr. Gay will bring a ripe scholarship and seasoned experience to the University, and will be a most important addition to our faculty. The writer is gratified to be relieved of the burdens of administration, and to be able to devote himself more completely to scholastic work.



## TEACHING ACTIVITIES

SUBJECT OF COURSE	FIRST SEMESTER			SECOND SEMESTER		
	Number of Course	Number Enrolled in Course	Instructor	Number of Course	Number Enrolled in Course	Instructor
Elementary Live Stock Judging . . .	135	80	Coffey	135	50	Coffey
Principles of Feeding . . . . .	137	64	Plumb	137	55	Plumb
Horse Production and Management	141	26	Kays	143	60	Coffey
Swine Production and Management	..	..	..	145	28	Conklin
Dairy Cattle Production and Management . . . . .	..	..	..	147	26	Plumb
Sheep Production and Management	..	..	..	151	13	Kays
Advanced Live Stock Judging . . . .	151	13	Kays	153	11	Conklin
Meats and Meat Products . . . . .	155	15	Plumb	157	28	Kays
Live Stock Markets and Marketing	..	..	..	161	1	Conklin
Animal Genetics . . . . .	..	..	..	164	6	Kays
Herd Book Study . . . . .	163	1	Plumb	118	10	Coffey
Research and Thesis . . . . .	117	20	Jacoby	121	12	Conklin
Poultry Husbandry . . . . .	..	..	..	122	14	Jacoby
Poultry Culture . . . . .	..	..	..	132	8	Jacoby
Incubator Practice . . . . .	..	..	..	202	3	Kays
Types and Breeds of Live Stock	..	..	..	52	74	Conklin
Research (Graduate School) . . . .	51	98	Kays	54	48	Kays
Types and Breeds of Live Stock	..	..	..	56	10	Conklin
Feeding . . . . .	..	..	..	60	14	Kays
Breeding Live Stock . . . . .	57	48	Coffey	..	..	Jacoby
Live Stock Management . . . . .	59	18	Jacoby	..	..	Kays
Poultry Husbandry . . . . .	..	..	..	..	..	Coffey
Federal Board Vocational . . . . .	..	..	..	..	..	Conklin
Live Stock Management . . . . .	..	..	..	57	50	Kays
Elementary Judging . . . . .	..	..	..	52	42	Coffey
Feeding . . . . .	..	..	..	54	45	Conklin
Poultry Husbandry . . . . .	..	..	..	60	3	Conklin
Winter Short Course . . . . .	..	..	..	..	..	Jacoby
Animal Breeding . . . . .	..	..	..	69	..	Bishop
Feeding . . . . .	..	..	..	69	..	Plumb
Breeds and Judging . . . . .	..	..	..	69	..	..

During the first semester 407 students were enrolled in classes in the department, with 667 enrolled the second semester a total of 1074 for the year. This does not represent a total of different students but of class enrollment.

No changes of importance in the courses of study were made during the year. Three courses in Poultry Husbandry (119, 120, and 124) were not given, these subjects not being elected this year.

A very important addition to the working equipment of the department has come from the leasing of the Hess farm along the north and west side of the University property, west of the Olentangy River. This has provided two sets of buildings with associated pastures on the property

between the river and Olentangy Road, a large barn provides much desired accommodations for a part of our beef cattle herd. Another barn and outlying lands, lying between the University lands on the northwest and Hocking Valley Railroad, adds in an important degree to our accommodations for caring for our horses. The interiors of these two barns at nominal expense, have been somewhat remodeled to suit the University needs. Much fencing of pastures and feed lots, however, is necessary to properly restrain the movements of both cattle and horses.

#### LIVE STOCK AND ITS CARE

The University herds and flocks have maintained a good average condition of health, and have steadily improved in character and productive capacity. Our annual inventory, dated January first, summarized by breeds, is as follows:

Class	Breed	Head	Appraised Value
Horses	Percheron	17	\$9,925.00
Horses	Belgian	5	2,300.00
Horses	Miscellaneous	3	250.00
Cattle	Jersey	16	3,550.00
Cattle	Holstein-Friesian	19	5,725.00
Cattle	Guernsey	8	1,450.00
Cattle	Ayrshire	6	900.00
Cattle	Shorthorn	25	8,525.00
Cattle	Aberdeen-Angus	23	6,350.00
Cattle	Red-Polled	4	485.00
Cattle	Grades and Crosses	17	1,325.00
Sheep	Shropshire	30	1,965.00
Sheep	Southdown	23	1,500.00
Sheep	Merino	7	270.00
Sheep	Grades and Crosses	35	510.00
Swine	Duroc-Jersey	42	2,510.00
Swine	Berkshire	22	940.00
Swine	Large Yorkshire	13	890.00
Swine	Poland-China	10	525.00
Swine	Miscellaneous	12	360.00

This inventory shows the following grand total:

Class of Stock	No. Head	Appraised Value
Horses	25	\$12,475.00
Cattle	118	28,310.00
Sheep	95	4,245.00
Swine	99	5,325.00
Total	337	\$50,225.00

Besides the above, the annual inventory of the Poultry Plant shows a total of 416 fowls, at an appraised value of \$1,128.00.

Out of the state appropriation of \$3,800.00, during the year a number of important purchases of breeding animals have been made, including one Berkshire boar pig, one large Yorkshire boar pig, five Shropshire ewes, one Shropshire ram, one Duroc-Jersey sow, one Ayrshire bull, and one Belgian yearling filly. A number of breeding fowls were also purchased for the Poultry Plant.



During the year the University exhibited live stock at the Ohio State Fair, and at the International Live Stock Exposition at Chicago. Horses and sheep were shown at the State Fair, and with considerable success, our Percherons and Belgian horses winning among the highest honors.

For many years the University has annually conducted tuberculin tests of our cattle, and we have long maintained a herd that was essentially free from tuberculosis, although an occasional reaction occurred. Since the United States Bureau of Animal Industry is giving certificates to herds known to be free of tuberculosis for a trial period of three years, the University has made application for such recognition. It is anticipated as a result of our next test, that the University herd will be placed by the Government on the accredited list.

During the year official testing of our dairy cows, which had been largely discontinued during the past few years, was renewed and we now have eight cows on yearly tests, with some very satisfactory records in progress.

#### EXTENSION SERVICE

During the year the regular extension workers have been engaged in various lines of service, of which the following are more noteworthy: Giving four beef cattle demonstrations, especially as applied to the use of silage; instructing at thirteen extension schools; assisting at four forage crop demonstrations; organizing six county live stock associations; supervising six stock judging contests and demonstrations; judging at five fairs; judging forty-one boys' and girls' club exhibits; attending twenty-two community breeders' meetings; and making fifty-seven special farm visits. In addition to the above, special work has been inaugurated in cooperation with the United States Bureau of Animal Industry, in establishing a campaign in behalf of the use of pure-bred sires in Ohio to the exclusion of all scrubs and grades. The promotion of this work begun late last fall, 1919, should be aggressively pushed, for it can but result in far reaching benefits to the herds of the State. The work of organizing community breeding associations, in which the University has played a very active part has resulted in much progress being accomplished within the last year. All of the instructors in the department engaged to a more or less extent in extension service and especially engaged in addressing live stock associations, judging at local fairs, and special shows, visiting farms in an advisory capacity, and assisting in judging at Boys' and Girls' contests. Very important culling demonstrations have been held over the state by the poultry extension workers on the methods of selecting and judging fowls for production.

Twelve poultry culling schools for county agents were held, and sixty county agents signed an agreement to promote one such school in each of the counties they represent. A total of one hundred and six demonstrations were also held on farms in thirty-five counties where the subjects of housing, feeding, incubation, brooding, and management of poultry were discussed.

These demonstrations are to promote a better flock husbandry and make poultry keeping more profitable. The records show that over thirty-five hundred persons attended these demonstrations. The poultry extension instructors delivered eighty-four lectures at farmers' institutes and forty-eight at extension schools.

#### PUBLICATIONS

Many contributions were made during the year to the agricultural, live stock, and poultry press, by members of the Department Staff. Professor Kays contributed to the Ohio Farmer a Series of articles on Ohio Percheron brood mares of merit. Professor Conklin contributed a number of articles describing herds of cattle in the State, and Professor Jacoby numerous articles on poultry production in Ohio, and the day-old chick business of the State. The following publications have also been prepared and have appeared during the year:

- Types and Breeds of Farm Animals, Revised edition, 820 pages, 365 illustrations.  
Ginn & Co. Boston..... C. S. Plumb.
- The Economy of Forage Crops in Pork. Production, Bulletin 14, Vol. XV.  
pp. 8, revised, Agricultural Extension Service..... J. W. Wuichet.
- The Farm Poultry House, Circulars No. 29, Vol. V. pp. 4. Agricultural  
Extension Service..... H. D. Monroe.
- Care of the Growing Chicks, Circular 54. Vol. V. pp. 4. Agricultural  
Extension Service. .... H. D. Monroe.
- Poultry Lice and Mites, Circular No. 55. Vol. V. pp. 4. Agricultural  
Extension Service. .... H. D. Monroe.
- Culling the Poultry Flock, Circular No. 56. Vol. V. pp. 4. Agricultural  
Extension Service..... E. L. Dakan.

It is highly desirable that opportunity be afforded for a reasonable amount of research work by instructors in the department. Provision has been made whereby the writer, may in future, engage in such work, but if much is to be accomplished in this direction, then will it not be desirable to furnish some of the more seasoned instructors with suitable assistants, so that they may be relieved of excessive class work, and devote time to research? Under present conditions not much is possible in this direction.

Respectfully submitted,

C. S. PLUMB,  
*Head of Department.*



REPORT OF THE DEPARTMENT OF  
BOTANY.

*Dean ALFRED VIVIAN.*

DEAR SIR:—Following is my report for the Department of Botany for the year 1919-1920:

In spite of the fact that we were unable to offer any courses in Plant Pathology, I believe that the work of the Department as a whole came nearer meeting the needs of the students than during any previous year. Our enrollment in general botany was nearly doubled and during the first semester the work was carried by one instructor less than during the previous year. In spite of this there was marked improvement in the organization of the laboratory instruction, the quiz work and the preparation of laboratory materials. Conferences between instructors and assistants were held at frequent intervals and the improvement made in the course seemed to justify the great expenditure of time.

One of the most satisfying results of our attention to the advanced courses is the increasing interest in Plant Microchemistry. This course has been elected by a superior class of students from all parts of the college.

More than in any previous year there has been cooperation between the Departments of Horticulture, Farm Crops, Agricultural Chemistry and Botany. The botanists are quite sure that this is a most desirable relation to be still further developed. The best interests of research students can only be served, it seems to me, by putting not only the Department, but the College at their command.

## EXTENSION SERVICE

To a limited extent practically all members of the teaching staff have devoted some time to extension work, but the bulk of this work has been in charge of Professor W. G. Stover. Under a special appointment with the Extension Department, Mr. Stover devoted his entire time to extension work and personally supervised much of the work on plant diseases carried on in the State. A brief statement of the principal projects which he had under investigation during the year follows:

Seed treatment for the prevention of smuts of the small cereals. This is a continuation of the work of previous years including demonstrations and follow-up work with the farmers and the maintenance of a demonstrations plot on the University farm to study the comparative values of different methods of seed treatment.

Wheat scab. The results of the state-wide cereal disease survey in cooperation with the U. S. Department of Agriculture in 1919 tended to confirm the idea that scab of wheat is more prevalent and destructive when wheat follows corn than when it follows some other crop. It is known that the fungus which causes wheat scab also attacks corn causing

a root and stalk-rot, passes the winter in the old fallen stalks, and in the spring produces the abundance of spores which may be carried to the young wheat heads and start the scab infection. In the southern and western parts of the state, where the prevailing rotation is corn, wheat and clover, scab is very severe and destructive, while in the northern part where the prevailing rotation, in regions investigated, is corn, oats, wheat, and clover, scab occurs to a very slight extent.

**Barberry and Wheat Stem-rust work.** The barberry eradication work in cooperation with the U. S. Department of Agriculture, with Mr. John W. Baringer as Assistant State Leader, was continued. Considerable progress was made in the survey and eradication work and considerable data were collected which show the responsibility of barberry bushes for local epidemics of black stem-rust of wheat in the state and the possibility of successfully combating this rust by removal of the barberries that harbor it.

**Corn Root Rot.** The work on the corn root rot started in the spring of 1919, was carried thru the season and more carefully planned demonstrations were started this spring on one farm in Greene County and on three farms in Clermont County.

**Clover Diseases.** For several years numerous complaints have been made of clover troubles in Western Ohio. A partial survey of clover fields in this section was made in the spring of 1920. The difficulty is not yet solved but it has been shown that several causes are operating to make the growing of red clover an uncertain venture. Among these are insect depredation, fungous diseases, winter killing and poor soil conditions.

**Apple-spraying Demonstrations.** In cooperation with the Department of Entomology and Horticulture, a number of orchards in different counties are being sprayed according to a definite program for the control of fungous diseases and insect pests and a careful survey of the results is to be made this fall. A modified spraying schedule for controlling apple blotch was worked out and applied with results much better than those reported from apple blotch control work in any other state.

**The Use of Disease-resistant Strains.** The only control method possible for such diseases as cabbage yellows, root rot of tobacco and fusarium wilt of tomato, which are causing considerable losses to Ohio growers, is the discovery and use of resistant varieties or strains of the hosts. Resistant strains of certain varieties of the above hosts have been discovered in different parts of the country and Mr. Stover has secured seeds of such resistant strains and distributed them to growers in several parts of the state thru the county agents for trial in their respective localities.

**Demonstrations at Agricultural Fairs and at Meetings of Farmers and County Agents.** Methods of controlling certain plant diseases were illustrated at several fairs during the summer and fall of 1919.



Numerous demonstrations and conferences with farmers and county agents were held. Mr. Stover's record for the year is 88 meetings with a total attendance of 1747.

## TEACHING ACTIVITIES

	Course Number	Credit Hours	Number Students	Course Number	Credit Hours	Number Students
General Botany .....	101	3	580	102	3	382
Plant Histology .....	107	2	3	...	...	...
General Dendrology .....	110	2	4	...	...	...
Plant Ecology .....	117	3	8	118	3	8
Plant Genetics .....	121	3	1	...	...	...
Plant Morphology .....	123	4	6	124	4	6
Plant Physiology .....	125	4	26	126	4	23
Minor Investigations .....	133	3-5	8	134	3-5	12
Evolution of Plants .....	135	1	3	136	1	2
Dendrology of Conifers .....	...	...	...	142	2	4
Plant Microchemistry .....	151	3	10	...	...	...
Systematic Botany (Research) .....	201	3-10	1	202	3-10	1
Physiology .....	205	4-10	2	206	4-10	2
Seminary in Botany .....	209	1	1	210	1	1
Total .....	...	...	653	...	...	441

Altogether there were 1094 Registrations in the Department. Mr. Swarna Kumer Mitra completed his work for the degree of Doctor of Philosophy.

Professor Schaffner continued his studies in the Taxonomy of the Plant Kingdom and has made considerable progress in the preparation of the manuscript. He has experimented with hemp to determine the factors connected with Sex determination. A part of the results have been published. He has also assembled much information and many observations bearing on this problem.

Dr. Griggs conducted a large expedition to Alaska and continued his explorations in the vicinity of Mt. Katmai. He has spent most of his time assembling the results and has published a part of them.

## PUBLICATIONS

- Numerous short articles in Extension Service Bulletins and Experiment Station Monthly..... W. G. Stover.
- Unusual Dichotomous Branching in Veronia. Ohio Jour. Sci. 19:487-490, 1919.  
..... J. H. Schaffner.
- The Beginnings of Revegetation in Katmai Valley, Ohio Jour. Sci. 19:318-243, 1919..... R. F. Griggs.
- Comparative Transpiration of Tobacco and Mullein. Ohio Jour. Sci. 19:422-426, 1919..... J. D. Sayre.
- A Remarkable Bud Sport of Pandanus. Jour. of Heredity, 10:376-378, Nov. 1919..... J. H. Schaffner.
- The Diecious Nature of Buffalo-Grass. Bulletin Torrey Botany Club.  
..... J. H. Schaffner.

- Factors Controlling Variation in the Rate of Transpiration. Ohio Jour. Sci.  
19:491-509..... J. D. Sayre.
- The Relation of Hairy Coverings to the Resistance of Leaves in Transpiration,  
Ohio Jour. Sci ..... J. D. Sayre.
- (Thesis)..... A. E. Waller.
- Dieciousness in *Thalictrum dasycarpium*. Ohio Jour. Sci.....J. H. Schaffner.
- Additions to the Catalog of Ohio Vascular Plants for 1919..... J. H. Schaffner.
- Revised Edition of "Directions for Laboratory and Field Work in General  
Botany." .....E. N. Transeau and H. C. Sampson.

Respectfully submitted,

E. N. TRANSEAU,  
*Head of Department.*



## REPORT OF THE DEPARTMENT OF DAIRYING

Dean ALFRED VIVIAN.

DEAR SIR:—I respectfully submit the following report of the Department of Dairying for the year of 1919-1920:

It has been the endeavor of the Department to familiarize the students with all phases of dairy work and to present to them so far as possible the practical as well as the scientific side of all subjects taken up. The elimination of the commercial work has reduced opportunities for practical experience and the shortage of heat, light and power has limited the work in some of the courses given.

### TEACHING ACTIVITIES

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course Number	Number Students Enrolled	Instructor	Course Number	Number Students Enrolled	Instructor
Principles of Dairying.....	101	60	Stoltz	101	36	Stoltz
Farm Dairying.....	...	...	Erf	102	19	Erf
City Milk Supply.....	103	8	Burke	104	12	Burke
Buttermaking.....	105	13	Stoltz	105	5	Kochheiser
Cheese Making.....	107	5	Stoltz	107	6	Stoltz
Ice Cream Making.....	110	8	Burke	110	8	Burke
Advanced Dairying.....	113	10	Erf	114	8	Erf
Dairy Buildings.....	115	7	Erf	...	...	...
Milk Condensing.....	...	...	...	116	16	Erf
Proseminary.....	119	1	Erf	120	1	Erf
Advanced Dairying.....	201	2	Erf	202	1	Stoltz
Dairy Production and Manufacturing.....	53	46	Erf & Stoltz	53	29	Erf
Dairy Farm Management.....	57	8	Erf	58	5	Erf
Winter Course.....	...	...	...	...	...	...
Agriculture.....	...	...	...	...	...	...
Winter Course Dairying.....	...	...	...	...	...	...
Elementary Dairying.....	52	88	Stoltz-Burke	52	68	Stoltz-Burke

During the year a total of 470 students were enrolled in the courses offered by the department. In addition to this special instruction in Cow Testing Association Work was given to about 120 men.

### RESEARCH

Certain lines of research work carried on by the Department have been in progress for a number of years and the work has been continued during the past year. Attention has been given to the selection of the best combination of feeds for economical milk production and to the feeding and care of the cow when maximum production is desired.

The value of the sire in transmitting desirable characteristics and a study of the development of high production in certain families through breeding, feeding and care.

The value of milk as a food, its disease resisting influence and a study of the assimilation of milk by the normal system.

Much time and attention have been given to obtaining accurate figures on the cost of milk production which is of great importance at the present time in order to obtain a fair basis for determining prices.

#### EXTENSION SERVICE

In the interest of agricultural extension in dairying, the head of the department has attended 142 dairy meetings held in the state and 12 dairy meetings held in other states. This includes 6 farmers' institutes.

A large number of dairy organizations have been affected for bringing about more efficient methods, improving sanitary conditions and studying feeding and breeding with the object in view of increasing production and thereby producing more economically.

Mr. McKellip and Mr. Axtell a portion of the year, have devoted their time to dairy extension work. Mr. McKellip attended a large number of meetings for the purpose of organizing and reorganizing cow testing associations. He assisted in organizing 18 dairy calf clubs; attended 9 extension schools; 37 community meetings; 35 organization meetings; and 30 local meetings. He assisted in the purchase of about 3,000 head of dairy cattle and has supervised the Circle W. Farm Boys' Contest.

Mr. Axtell assisted in the organization of cow testing associations, trained men to test for these associations, attended dairy meetings, visited farms and assisted in all lines of dairy extension work.

#### COW TESTING WORK

From June, 1919, to June, 1920, approximately 1,036 Holstein-Freisian cows were tested for seven to sixty days. There are 48 Holstein cows in the State having records of 1,000 pounds or more butter, which is more than any other two states in the union. Sixteen percent of all the Jerseys on test in the United States are tested in Ohio and one 950 pound butter fat record was made during the year, in addition to a large number of other very creditable records.

The following figures show the number of cows on yearly test from June, 1919, to June, 1920, and the number of herds represented:

BREED	1919-1920	
	Number Cows	Number Herds
Jerseys .....	1,025	144
Holsteins .....	436	74
Guernsey .....	157	34
Ayrshires .....	94	7
Shorthorns .....	26	3
Brown Swiss .....	5	1
Total .....	1,743	263



Fifty-five supervisors are being employed either on full or part time. The owners of the cows have paid \$34,091.01 for this work during the year.

## PUBLICATIONS

The following publications and articles were written by members of the department:

6th Edition Dairy Fundamentals; Disease Resisting Influence of Milk, Milk Magazine; Feeding for High Production, Delaval Monthly; Articles on General Dairy Subjects for Ohio Farmer, Hoards Dairyman, Kimball's Dairy Farmer, Dairy Price Reporter, and other magazines . . . . . O. Erf.  
Thesis on Ice Cream Making and Swiss Cheese Making; Article for Ice Cream Trade Journal . . . . . A. D. Burke.  
Report of Dairy Products Exhibit, National Dairy Show. . . . . R. B. Stoltz.

Respectfully submitted,

OSCAR ERF.

# ANNUAL REPORT OF THE DEPARTMENT OF FARM CROPS FOR THE YEAR ENDING JUNE 30, 1920.

With the return of students to college following the close of the war enrollment in the classes of the department has been restored to about its pre-war status.

Mr. Verle C. Smith resigned his position as Assistant Professor of Farm Crops and Extension Specialist effective June 30, 1919, and the vacancy has not yet been filled.

Two temporary appointments were made during the year to help with the resident teaching and with extension work. Mr. E. J. Walter was on appointment from November 12, to February 29, chiefly as instructor for the Eight Weeks course. He also did extension work, judging grain exhibits and lecturing at the meetings held in connection with the grain shows. Mr. Earl A. Chenault was appointed for a period of three months during which time he managed the State Corn and Grain Show, judged a number of grain shows throughout the state and otherwise assisted the extension specialist. Some extra labor was employed during the growing and harvesting season to care for the field experiments and for the growing of laboratory materials.

The following table shows that a total of 582 students were enrolled in all the courses during the year:

## TEACHING ACTIVITIES

SUBJECT OF COURSE	FIRST SEMESTER			SECOND SEMESTER		
	Number of Course	Number Enrolled in Course	Instructor	Number of Course	Number Enrolled in Course	Instructor
Field Crop Production.....	101	76	Willard	101	36	Willard
Cereal Crops.....	109	14	Park	.....	.....	.....
Forage Crops.....	.....	.....	.....	111	11	Willard
Special Crops.....	.....	.....	.....	112	8	Park
Plant Breeding.....	.....	.....	.....	113	4	Park
Minor Investigation.....	119	3	Willard	120	4	Willard
Research.....	201	2	Park	202	2	Park
Seminary.....	203	5	Park	204	3	Park
Crop Production.....	51	86	Willard	52	83	Willard
Farm Crops (Special Course for *F. B. V. T.).....	51	42	Willard	52	53	Willard
Farm Crops (8 weeks).....	.....	110	Walter	.....	.....	.....
Dairy Farm Crops (4 weeks course).....	.....	40	Walter	.....	.....	.....

\*F. B. V. T.—Federal Board for Vocational Training.

Several complete sets of grain grading apparatus and sufficient quantities of all the market classes of wheat are now available for students use in grain grading work. More and better illustrative material of all



the cereal crops and forage crops is now on hand than ever before. The plant breeding investigations on wheat, oats and barley, have furnished an abundance of material which is ideal for illustrating the principles of heredity to students.

The field crops garden which now contains a considerable collection of species and varieties is a valuable adjunct to the laboratory teaching and it is used by the classes throughout the growing season. Each class in the spring and fall makes one or more trips to the Kautz farm across the river to observe and study the experiments in progress there. This is of greatest benefit to the summer school students.

### RESEARCH

The main research projects which are now in progress are as follows:

1. Inheritance studies in oats: a cross of *Avena fatua* X *A. Nuda*. The genetic interest in this work which is now in the third hybrid generation lies in the varying proportions of hulled and hullless kernels which are found on hybrid plants. The effect of environment on this behavior is being studied.
2. Studies of inheritance in barley hybrids. The technical genetic problem here is a study of the peculiar way in which beards, hoods, and beardlessness are inherited. This problem has a direct bearing on some of the fundamental problems of heredity.\*

The practical interest lies in the attempt to secure a productive, beardless barley. The work is now in the third generation and many of the beardless strains produced by the segregation have the appearance of being good yielders of grain. Further yield tests of large numbers of these will tell whether they have value or not.

The barley work in the summer of 1920 involves the growing observation and recording of about 20,000 individual plants, and the oats require similar observations of about half that many plants.

This work furnishes splendid laboratory material for the students in plant breeding, both undergraduate and graduate.

3. A selection experiment in broom corn. This has been in progress for three years and it is evident that head selection in this type of plant is a successful method of improvement. Some of the strains secured are decidedly superior to the commercial varieties.
4. The yield testing of varieties of cereals and soy beans is being continued. This serves to determine which varieties are adapted to this region. In the test are included all the common local varieties, new ones secured from other regions and the new strains produced by the breeding work. Fulghum oats, a variety unknown commercially in Ohio gives promise of being our most productive variety. Likewise the Manchu soy bean has for two years out-yielded all others.

The variety test is our only means of discovering these facts concerning varieties which when established are of great practical value.

5. A field study under farm conditions of the productions of corn alone compared with corn and soy beans grown together. Results of the first year's work are favorable to the mixture as shown in the table.

## CORN VS. CORN AND SOY BEANS

Yields per acre of Silage and of Dry Material, 1919

EARLY SERIES PLANTED MAY 29.

	CORN ALONE DRILLED	CORN DRILLED WITH BEANS			CORN ALONE CHECKED	CORN CHECKED WITH BEANS			BEANS ALONE DRILLED
		Corn	Beans	Total		Corn	Beans	Total	
Green Weight . . . . .	11,547	11,440	5,707	17,146	9,380	8,860	.....	.....	16,952
Dry Weight . . . . .	7,050	6,349	1,802	8,150	5,758	5,971	.....	.....	5,986
Loss . . . . .	4,497	5,091	3,905	8,996	3,622	2,889	.....	.....	10,966
Loss % . . . . .	39.0	44.5	68.4	52.5	38.6	32.6	.....	.....	64.7
Bu. Grain . . . . .	58.72	53.42	7.44	.....	54.08	54.78	1.144	.....	23.91

LATE SERIES PLANTED JUNE 10.

Green Weight . . . . .	14,552	13,360	2,525	15,885	11,144	12,048	7,248	12,773	11,232
Dry Weight . . . . .	7,041	6,698	.....	.....	5,805	5,893	.....	.....	.....
Loss . . . . .	7,511	6,662	.....	.....	5,342	6,155	.....	.....	.....
Loss % . . . . .	51.6	49.9	.....	.....	48.0	51.1	.....	.....	.....
Bu. Grain . . . . .	47.42	45.03	5.92	.....	42.80	42.50	1.392	.....	21.50

Reid's Yellow Dent corn and Meyer soy beans were used.

The experiment consisted of a series of five plots, namely:

- A. Corn alone drilled.
- B. Corn drilled with beans.
- C. Corn alone checked.
- D. Corn checked with beans in the hill.
- E. Beans alone.

The plots were 1-40 acre in size. The series was repeated ten times, five replications planted May 29, and another five planted June 10.

Half of each plot was cut at the right stage for silage and is recorded as greenweight. The other half was allowed to mature, then was cut and weighed after becoming air dry. On account of excessive rains in the fall complete data were not obtained for the late planted series.

In the early series drilled corn plus beans made 5599 pounds more silage or 1100 pounds more dry weight per acre than corn alone produced. Considering grain only, and averaging both series, drilled corn alone made 53.07 bushels per acre. Grown with beans it was reduced to 49.22 bushels, a loss of 3.85 bushels due to the presence of beans, but this loss was more than equalized by the production of 6.68 bushels of soy beans. The experiment is being repeated in 1920.

6. An experiment to determine the best time of cutting soy beans for seed and for hay by determining the yield, appearance and germination when harvested at different stages of maturity.

The plan is to grow the soy beans in rod rows and to harvest them at six different stages of maturity. Eight rows are used for each harvest. One year's work has been completed and planting has been done for another crop.

All members of the department participate more or less in the work involved in these experiments but Mr. Lutz has had immediate supervision of most of the work. About four acres of land near the Homoeopathic Hospital is used for crop experiments and all of the twenty acre Kautz tract.



## THE KAUTZ FARM

The Kautz farm, a tract comprising twenty acres, is entirely under crops experiment. Last year it was thoroly tile-drained. The department is indebted to Mr. P. B. Potter, of the Agricultural Engineering Department, for surveying the field and helping to lay out the permanent plot system. The ranges of plots are separated by sixteen-foot roadways which were seeded to grass and now are well sodded, adding much to the appearance of the field.

## EXTENSION SERVICE

The major effort in extension work was put upon the three projects, wheat standardization, corn improvement and general seed improvement. Practically all of the work was done in cooperation with county agents as a part of their county programs of work.

Wheat standardization is an effort to substitute pure seed of one or two high-yielding good-milling wheats for the numerous mixed and mediocre varieties found on most farms. This work is done through the cooperation of the Farm Crops Department with the County Farm Bureaus and the Ohio Seed Improvement Association.

Results secured in Williams County are typical of those in other counties. Work was begun there in the fall of 1918 and by the fall of 1919, as a result of the efforts of County Agent C. G. Fieldner, 2500 acres of land were sown to the two chosen varieties of wheat, Gladden and Trumbull. Carefull inspection will be made of all fields by a committee and those fields which measure up to a high standard of purity will be advertised as sources of seed. Many other counties are showing similar work and good progress is being made.

Due to the combined efforts of many in this direction the demand for seed of the varieties Gladden, Portage and Trumbull in the fall of 1919 far outran the supply, altho several thousand acres of wheat were sold for seed purposes.

## THE TEN ACRE CORN CONTEST

The Ten Acre Corn Contest has proven to be a very effective means of stimulating interest in all the factors that make for high and profitable yields in corn. Men from 29 counties finished the work in the contest. Eleven of these qualified for membership in the Hundred Bushel Corn Club of Ohio by growing one hundred or more bushels per acre on ten acres. The highest yield, 128.8 bushels, was secured by Mr. C..L. Slack, of Zanesville, and it was done on hill land. The next highest was 112.6 bushels by Mr. J. D. Woodburn, of Urbana. These fields are being used by county agents as demonstrations of good practice in corn production.

## FARMERS' WEEK

During the week the department conducted a series of lectures each day at 10 o'clock in the Chapel. The main theme of the series was to show the importance of varieties and methods by which they are produced and distributed.

Professor J. F. Cox, of Michigan Agricultural College, spoke on Wednesday about the work of the Michigan Crop Improvement Association. On Friday the members of the 100 bushel Corn Club told their experiences.

From 8 to 10 each morning laboratory instructions were given in seed testing. This was designed to help farmers to know seeds, so that they may detect adulteration and thus buy more intelligently. Professor Willard was chiefly responsible for this work.

From 1 to 2 o'clock each day a lecture demonstration of the process of grading grain was given.

#### COOPERATION WITH THE SMITH-HUGHES HIGH SCHOOLS

Frequent requests have been received from teachers of agriculture in the high schools for farm crops laboratory material. With the establishing of the Smith-Hughes high schools there was prospect of a greatly increased demand for such materials and they are materials which are difficult for them to obtain. Partly in self-defense but chiefly to aid these schools, this department set about systematically to grow, collect and prepare for shipment, samples of several varieties of oats, wheat, barley, corn and grasses. These have been supplied to practically all of the Smith-Hughes schools.

#### PUBLICATIONS

The following publications have appeared during the year, all of them of an extension nature. Articles published in farm papers are not included in the list:

Hanger, W. E.	Buckwheat	Ext. Cir. V, 3
Hanger, W. E.	Red Clover	Ext. Bul. XV, 6
Hanger, W. E.	Alfalfa	Ext. Bul. XV, 7
Hanger, W. E.	Sweet Clover	Ext. Bul. XV, 12
Park, J. B.	Hairy Vetch	Ext. Cir. V, 20
Park, J. B.	The Soy Bean	Ext. Bul. XV, 11
Smith, V. C.	Navy Beans	Ext. Cir. V, 2
Willard, C. J.	Rape	Ext. Cir. V, 1

Respectfully submitted,

J. B. PARK



# REPORT OF THE DEPARTMENT OF HOME ECONOMICS 1919-1920

Dean ALFRED VIVIAN.

DEAR SIR:—Permit me to present the following report of the Department of Home Economics for the year 1919-1920:

The work of the Department has been carried through although a number of difficulties have had to be faced. The year opened in September with promise of a return to a normal program following the confusion incident to the War. Very soon, however, Miss White, Head of the Department, was elected to the Directorship of the Merrill-Palmer School at Detroit, and although she did not resign her position here until February first, an element of uncertainty, hard to meet, was injected into the situation of the Department. Two other resignations were accepted during the year. Miss Maude Hathaway, Assistant Professor, in charge of courses in Dress, gave up her work February first and Miss Elizabeth Baines, who had been employed to have charge of the course in Institutional Food, resigned April first.

Added to these losses from the teaching force, Mrs. Grace G. Walker, Assistant Professor, in charge of courses in Textiles and Household Management, was granted leave of absence from February 20th to the close of the year on account of illness.

These withdrawals necessitated the employment of four emergency instructors and also added to the work of the regular instructors.

It would be absurd to claim that the work was done as well with a crippled teaching force as it would have been under normal conditions. But, it can be stated that due to the fine spirit of the faculty, including the emergency instructors, the program of courses was carried through as scheduled.

COURSE SUBJECT	1919-1920					
	FIRST SEMESTER			SECOND SEMESTER		
	Course Number	Credit Hours	Total Students in all Sections	Course Number	Credit Hours	Total Students in all Sections
Foods . . . . .	101	5	86	102	5	80
Sanitation . . . . .	104	3	18	104	3	49
Teaching of Home Economics . . . . .	108	2	17	108	2	17
Textiles . . . . .	111	2	153	112	2	133
Dress . . . . .	113	3	19	113	3	10
Dress . . . . .	116	2	11	116	2	11
House . . . . .	118	3	41	118	3	45
House . . . . .	119	3	12	119	3	53
Food Problems . . . . .	121	3	23	121	3	23
Practice Teaching in Home Economics . . . . .	123	2	11	124	2	10
Proseminary . . . . .	105	2-5	29	105	2-5	16
Proseminary (not offered) Dietetics . . . . .	110	4	48	110	4	48

Instructors giving the courses listed in preceding table:

- 101, 102. FOODS. Lelia McGuire, Adelaide Barer, Rosetta Harpster, Elizabeth Baines, Josephine Hamblin, Elsie Steiger.
104. SANITATION. Grace Linder.
108. TEACHING OF HOME ECONOMICS. Maude G. Adams.
- 111, 112. TEXTILES. Grace Walker, Alice Donnelly, Adelaide Barer, Louise Wood, Dorothy Ronan.
113. DRESS. Maude Hathaway, Grace Walker, Catherine Metzler, Louise Wood.
116. DRESS. Alice Donnelly, Louise Henget.
118. HOUSE. Alice Donnelly.
119. HOUSE MANAGEMENT. Grace Walker, Dorothy Ronan.
121. FOOD PROBLEMS. Elizabeth Baines.
- 123, 124. PRACTICE TEACHING IN HOME ECONOMICS. Maude G. Adams.
105. PROSEMINARY. Anna R. Van Meter.
110. DIETETICS. Lila Skinner, Elsie Steiger.

#### EXTENSION SERVICE

Extension work in Home Economics has gone forward and much of the ground lost through the withdrawal of Government support of Home Demonstration work has been regained through direct cooperation with the counties. The work of specialists in health, nutrition, clothing and home equipment has also been developed. A very satisfactory survey of home equipment has been made in a number of townships in typical counties of the State.

#### PUBLICATIONS

The following bulletins and leaflets have been published by the Home Economics Extension service during the year, 1919-1920:

##### Bulletins:—

- Milk: Its importance as Food. 20 pp. .... J. F. Lyman.
- The Rural School Lunch, Dept. of Home Econ. 58 pp.
- Reading in the Home. 12 pp. .... W. L. Graves.

##### Leaflets:—

- The New Health Laws, 2 pp.
- The School Lunch, 6 pp.
- A Christmas Party, 3 pp.
- Account-Keeping in the Home, 2 pp.
- Poultry, 1 p.
- The Flower Garden, 1 p.
- The Foreigner in our Midst, 7 pp.
- A Study of Fabrics, 6 pp.
- The Bed and its Furnishings, 3 pp.
- The Influence of Dress, 6 pp.
- The Country Home, 5 pp.
- Recreation in Rural Communities, 5 pp.
- The Rural Church, 5 pp.
- The Rural School, 7 pp.
- Socialization of Rural Life, 5 pp.
- A Community Center, 7 pp.
- Health and Sanitation, 6 pp.



Nursing in Communicable Diseases, Pt. 1, 4 pp; Pt. II, 6 pp.

Suggested Outline of Textiles and Dress for County Normal Schools in Ohio.  
6 pp.

The following circulars have been reviewed for the Boys' and Girls' Club department:

1. Printed.

A. Food.

1. Foods and Beverages, 7 pp.
2. Starchy Foods, 8 pp.
3. Canning by the Cold Pack Method, 8 pp.
4. Canning Chart.
5. Jelly Making, 4 pp.
6. Vegetables and Fruits, 4 pp.
7. Breakfast and Supper Preparation, 4 pp.
8. Drying, 4 pp.
9. Canning Vegetable Combinations, Marmalade, 2 pp.
10. Use of Canned Fruits and Vegetables, 1 p.
11. Ways of Preparing Potatoes, 1 p.
12. Food and Milk, 7 pp.
13. Cheese and Eggs, 7 pp.
14. Meat and Meat Extenders, 8 pp.
15. Fish and Poultry, 4 pp.
16. Bread Making, 8 pp.
17. Canning Chicken, 2 pp.
18. Pickling, 2 pp.
19. Preparing and Planning Meals, 4 pp.
20. Preparing a Vegetable Supper, 4 pp.

B. Clothing.

1. Record Book, 4 pp.
2. Utility Box, 8 pp.
3. Apron, 24 pp.
4. Cap, 4 pp.
5. Dress, (1st year) 8 pp.
6. Dress, (2nd year) 4 pp.
7. Kimona Gown, 8 pp.
8. Chemise and Bloomers, 15 pp.
9. Underskirt, 7 pp.
10. Darning and Patching, 3 pp.

2. Mimeographed Material.

A. Food.

1. Baking Yeast Breads, 8 pp.
2. Canning Fruits and Vegetables by the Cold Pack Method. 8 pp.
3. Planning and Preparing Meals, 4 pp.
4. Canning Meats by the Cold Pack Method, 4 pp.

B. Clothing.

1. Remaking a Cotton Dress, 4 pp.
2. Silk Bag, 10 pp.

The following Mimeographed material has been revised this year:

A. Clothing.

1. Kimona, 12 pp.
2. Hemming Napkins and Table Linens, 5 pp.
3. Linen Doily or Dresser Cover, 6 pp.
4. Underwaist and Corset Cover, 6 pp.

DEPARTMENT OF  
VOCATIONAL HOME ECONOMICS

The Vocational Teacher Training Division includes training of teachers and supervision of work in the State.

The Practice Schools are located at North High School, Reynoldsburg, and Canal Winchester. Two and four-year courses of study in Home Economics are placed in these schools with an average enrollment of forty girls. Fifteen senior girls did their practice teaching in the above.

The twenty-two all-day schools in the state with two and four-year courses of study in Home Economics were supervised, and valuable results have been attained. Twenty-one were organized in High Schools and two other classes in the elementary grades for the over-age girl. Number of pupils reached by all-day school instruction was 860.

One part-time school was organized in a large city in the state, where a number of girls are employed in factories. This work is to continue next year.

Thirteen centers of Evening School work were in operation. The classes were made up of housewives, factory girls, clerks, etc. Twenty classes with an attendance of 374.

Several new features of the work this year were the improvement of teachers in service with the entire time of one instructor given to this, and the correlation of home making education with wage earning in the larger cities.

Respectfully submitted,

ANNA R. VAN METER,  
*Acting Head of Department.*



## REPORT OF THE DEPARTMENT OF HORTICULTURE

Dean VIVIAN.

DEAR SIR:—I have the honor of submitting the following report of the Department of Horticulture for the year, 1919-1920:

In some respects the school year just passed has been the most satisfactory that we have ever had. While our numbers in the upper classes have been small, yet the spirit has never been better and better things were attempted and carried through successfully by the students than ever before.

Professor Elwood returned from his service in the army in time to take up his work in the University at the beginning of the first semester.

Mr. E. E. Jacob resigned at the close of the year 1919 and our request for a man to take his place was not granted. Mr. Druckerman, of the senior class, took entire charge of the lectures and laboratories in one of the elementary short courses. At least half a dozen other seniors helped us with laboratory work as best they could. This of course is an unsatisfactory arrangement and the situation will be more acute next year.

Mr. Ingerson of the Extension Department resigned at the close of last year to engage in commercial work.

Mr. N. L. Glines has come to us recently to take up Extension work in vegetable gardening and is to pay particular attention to the canning crop interests. Any surplus time he may have, will be devoted to the interests of the truck growers.

### TEACHING ACTIVITIES

SUBJECT OF COURSE	FIRST SEMESTER		
	Course Number	Number Enrolled in Course	Instructor
Pomology .....	105	19	Paddock-Charles
Experimental Horticulture .....	109	10	Paddock
Farm Horticulture .....	118	34	Paddock-Charles-Montgomery
Systematic Pomology .....	121	9	Paddock
Vegetable Gardening, Com. ....	103	11	Montgomery
Systematic Vegetable, Gard. ....	131	4	Montgomery
Greenhouse Construction .....			
Horticultural Products .....	133	8	Montgomery
Principles of Horticulture .....	101	20	Hottes
Small Fruits and Grapes .....			
Garden Flowers .....	145	3	Hottes
Plant Variations .....	107	6	Hottes
Commercial Floriculture .....	141	3	Hottes
The Flower Shop .....			
Systematic Floriculture .....	147	2	Hottes
Plant Materials .....	151	6	Elwood
Design .....	157	5	Elwood

## ANNUAL REPORT

## TEACHING ACTIVITIES (Concluded)

SUBJECT OF COURSE	FIRST SEMESTER		
	Course Number	Number Enrolled in Course	Instructor
Advanced Design .....	159	1	Elwood
Special Problems .....	169	2	Elwood
History of Landscape Arch .....			
Preliminary Design .....			
Landscape Architecture .....			
Landscape Engineering .....			
Civic Design .....			
Horticultural Plant Forms .....	51	9	Druckerman
Principles of Horticulture .....	53	115	Charles
Pomology .....	57	9	Paddock
Landscape Gardening .....	60	2	Elwood
Floriculture .....	65	2	Hottes
Special Floriculture .....	60	2	Hottes
Floriculture .....			
Pomology, eight weeks .....		20	Charles
Vegetable Gardening, eight weeks .....		12	Montgomery

## TEACHING ACTIVITIES

SUBJECT OF COURSE	SECOND SEMESTER		
	Course Number	Number Enrolled in Course	Instructor
Pomology .....	106	12	Paddock-Charles
Experimental Horticulture .....	110	12	Paddock
Farm Horticulture .....	118	80	Paddock-Charles-Montgomery
Systematic Pomology .....	122	12	Paddock
Vegetable Gardening, Com. ....	104	8	Montgomery
Systematic Vegetable Gard. ....			
Greenhouse Construction .....	132	6	Montgomery
Horticultural Products .....			
Principles of Horticulture .....			
Small Fruits and Grapes .....	120	14	Charles
Garden Flowers .....			
Plant Variations .....			
Commercial Floriculture .....	142	4	Hottes
The Flower Shop .....	143	8	Hottes
Systematic Floriculture .....	148	2	Hottes
Plant Materials .....	152	6	Elwood
Design .....	158	4	Elwood
Advanced Design .....	160	1	Elwood
Special Problems .....	170	2	Elwood
History of Landscape Arch .....	154	5	Elwood
Preliminary Design .....	150	4	Elwood
Landscape Architecture .....	156	12	Elwood
Landscape Engineering .....	166	2	Elwood
Civic Design .....	165	1	Elwood
Horticultural Plant Forms .....	52	9	Druckerman
Principles of Horticulture .....	54	96	Charles
Pomology .....	58	1	Paddock
Landscape Gardening .....			
Floriculture .....			
Special Floriculture .....	61	2	Hottes
Floriculture .....	66	5	Hottes



## RESEARCH

Improvement of Vegetable Varieties by Selection.  
Studies of Strains and Varieties of Vegetables.  
Cultural Studies with Vegetables.  
Variety and Strain Tests with Forcing Vegetables.  
Cultural Tests with new Forcing Crops for Greenhouse.  
Sterilizing Soil by Hot Water Method.  
Monograph Studies of Iris.  
Tolerance of Spores of Certain Orchard Diseases to Some of the Standard Fungicides.  
The Influence of Soil Moisture.  
Fruit Bud Formation and Fruit Production of Cutting Grass on Various Dates in a Sod Mulch Orchard.

## EXTENSION SERVICE

Three men are now devoting their entire time to Extension work in Horticulture. Two men in fruit production and landscape gardening, and one in vegetable gardening.

In addition to these men, all members of the Department do a certain amount of this work, particularly Montgomery and Hottes who are called upon frequently.

The projects undertaken by the Department continue the same as last year, but will be added to materially when Mr. Glines gets his work on the vegetable fully outlined. The projects in Extension work undertaken by the Department may be summarized under the following heads:

Pruning Demonstrations.  
Spraying Demonstrations.  
Pruning Schools.  
Grading and Packing Demonstrations.  
Development of Young Orchards.  
Apple Blotch Control.  
Grape Berry Worm Control.  
Improvement of Vineyard Soils.  
Fertilization of Apple Orchards.  
Fertilization of Peach Orchards.  
Control of Root Form of Black Peach Aphis.  
Control of Tomato Blight.  
Landscape Improvement of Farm Homes, Rural Schools, Rural Churches, Cemeteries, Public Buildings and Roads.  
Extension Schools.  
Orchard Inspections.  
Farmers' Institutes.  
Judging Fair Exhibits.  
Judging Garden Contests.  
Inspection of Individual Orchards, Gardens, Greenhouses, etc.  
Writing Bulletins and Articles for the Press.

## STUDENT ACTIVITIES

As a result of this years experience, we are more firmly convinced than ever of the wisdom of developing wholesome, student activities. We have managed to have something of this kind for the students to look

forward to during the entire year. They have displayed great enthusiasm for this work and incidently this is reflected in the classroom work. The various activities that they engage in are, the Chrysanthemum show, the Apple show, the Annual Reunion, the annual contest of the Inter-State Apple judging league, the Departmental apple judging contest, the spring picnic, and finally, the Horticultural annual. Then too, a number of the students take an active interest in the Rose Show of the Columbus Horticultural Society. All of these projects have been carried to a successful conclusion, and all of these events are now looked forward to with enthusiasm by all of the students.

Two more activities are now in the process of formation. The suggestion that the Horticultural students of their society become affiliated with the American Pomological Society, originated here. President L. H. Bailey of the parent society stated that this was the best single idea that had ever came to him of the kind. As a result of this agitation, a convention was held here last December and preliminary plans were formulated. These are to be completed if possible at the coming meeting in December next.

Plans are also under way for the formation of a chapter of the University Landscape Architectural Society here at the University.

Respectfully submitted,

W. PADDOCK.



## REPORT OF THE DEPARTMENT OF RURAL ECONOMICS.

## TEACHING ACTIVITIES

SUBJECT OF COURSE	FIRST SEMESTER			SECOND SEMESTER		
	Number of Course	Number Enrolled in Course	Instructor	Number of Course	Number Enrolled in Course	Instructor
Farm Accounting.....	101	23	Hughes	101	12	Hughes
Adv. Farm Accounts.....	102	5	Falconer	.....	.....	.....
Farm Management.....	103	30	Falconer	.....	.....	.....
Agricultural Economics.....	104	53	Erdman	104	69	Erdman
Rural Community Life.....	.....	.....	.....	110	47	Lantis
Distrib. of Farm Production.....	113	20	Erdman	.....	.....	.....
Cooperation in Agriculture.....	.....	.....	.....	116	19	Erdman
Adv. Farm Management.....	.....	.....	.....	111	6	Falconer
Land Tenure.....	.....	.....	.....	114	6	Falconer
Rural Community Development.....	.....	.....	.....	118	5	Lantis
Research Work.....	201	6	Falconer	202	5	Falconer
Farm Accounts, (3 years).....	51	136	Hughes	52	119	Hughes
Cooperation in Agriculture (3 years).....	53	9	Erdman	.....	.....	.....
Rural Community Life (3 years).....	.....	.....	.....	54	15	Lantis
Farm Management.....	.....	.....	.....	**	66	Falconer
Agricultural Extension.....	.....	.....	.....	102	34	Lantis

\*\*Short Course

Dean VIVIAN.

DEAR SIR:—During the year a total of 685 students were enrolled in the courses of the department. Last year there were 221. Mr. I. J. Sollenberger completed work for his Master's degree with major in Rural Economics. Three others taking Master's degrees during the year minored in Rural Economics.

## RESEARCH

Two major projects have been started during the year in cooperation with the Office of Farm Management, U. S. Department of Agriculture.

## FARM COST ACCOUNTS

Two groups of farmers began January 1, keeping detailed cost accounts in cooperation with this department. One of these groups is in the vicinity of Medina in Medina County and the other around Jamestown in Greene County. There are twenty farmers in the Medina County group and seventeen in the Jamestown group. Mr. Early is stationed at Medina in charge of that route and Mr. Morison is at Jamestown. These farmers keep detailed record of all labor performed, crops raised, feed fed, and all items of receipt and expense. The route men visit each farm every other day and collect data. The data is sent to this office at

the end of the month where it is recorded and compiled. It is expected that this work will give us much detailed information as to the cost of producing farm products as well as provide data which may be made the basis of many studies in farm economics.

#### CONTINUED SURVEY OF TRACTOR FARMS

In July and August last, Mr. Hughes of this department and Mr. Montgomery of the Office of Farm Management, U. S. Department of Agriculture, took farm survey records on fifty farms in Putnam and Allen counties and fifty in Trumbull and Portage counties. These records were for the year 1918. These farms had all secured a tractor since the spring of 1919. In April 1920, survey records were again taken of the same farms for the 1919 year's business. During the year the men had kept a record of their tractor operations and costs. We now have a record of a year's business with a tractor and a year's business without a tractor. It is hoped to continue this work for three more years. We will then have detailed records as to tractor uses and costs and as to what adjustments have been made in the farm business.

#### OTHER RESEARCH WORK

Time has been given by Mr. Falconer to the completion of a bulletin on "Methods of Renting Land in Ohio". During July and August last much of the time was spent in the field collecting data for this bulletin. The bulletin will be published by the Experiment Station. Progress has been made on a bulletin to be entitled, "The Prices of Farm Products". A grant of \$150.00 from the Graduate Council to assist in this work has been very helpful.

Mr. Erdman spent the greater part of July and August in the field collecting data for an Experiment Station bulletin, "Marketing Ohio Tobacco". Work upon this study will be continued the coming year. Mr. Erdman also completed during the year a study of "Milk Marketing" which has been submitted as a thesis for the degree of Doctor of Philosophy at the University of Wisconsin.

#### EXTENSION ACTIVITIES

Mr. R. F. Taber has given his full time to farm management extension work. Mr. Arnold has also given his full time to farm management extension work in Rural Sociology. Mr. Z. B. Wallin since his appointment in May has given his full time to extension work in marketing. Mr. Falconer, Mr. Erdman and Mr. Hughes have also given such of their time as was available to extension work. A full report of the extension activities of the department will be submitted to the Director of Extension.



## PUBLICATIONS

- "The Agriculture of Ohio", Bulletin 326, Ohio Agricultural Experiment Station.....J. I. Falconer
- "The Arrangement of Farm Fields", by Agricultural Extension Bulletin, Volume XV. No. 1.
- "Fruit Growers' Account Book", By Agricultural Extension.....R. F. Taber
- "Farmers' Account Book" (A revision of the old book) by Agricultural Extension.

Numerous articles have been contributed by all members of the department to the farm papers.

Respectfully submitted,

J. I. FALCONER,  
*Head of Department.*

## REPORT OF THE DEPARTMENT OF ZOOLOGY AND ENTOMOLOGY

*To Dean ALFRED VIVIAN, College of Agriculture.*

DEAR SIR:—The following annual report of the Department of Zoology and Entomology for the year 1919-1920 is respectfully submitted:

The out-standing feature of the past year's work was the large enrollment, especially in the beginning courses. In the absence of Mr. Kostir, on leave, and our inability to secure our full quota of graduate assistants, we found ourselves somewhat shorthanded, especially during the first semester. However, by every one doing more than his share of work the situation was met in a fairly satisfactory manner. The second semester has been somewhat less crowded. Research work was somewhat interfered with by the coal shortage at various times during the year, which resulted in cutting off the electric lights and thus preventing night work. Also the shutting off of heat during the holiday vacation period interfered with plans for research on the part of members of the staff and a number of graduate students. Though this is deplored, it could not, of course, be prevented. The spirit of the teaching staff has been most excellent in spite of the rather unsettled salary situation which existed for a good part of the year.

### TEACHING ACTIVITIES

SUBJECT OF COURSE	FIRST SEMESTER				SECOND SEMESTER			
	Number of Course	Number Enrolled in Course	Instructor	Section No.	Number of Course	Number Enrolled in Course	Instructor	Section No.
Elementary Zoology.....	101	855	Osburn Barrows Krecker Wickliff and Assistants	1 4 4 4	102	520	Krecker Barrows Wickliff and Assistants	3 3 3
Elementary Zoology.....					101	75	{ Krecker and Assistants	
General Principles of Heredity	115	95	Barrows		115	70	Barrows	
Advanced Zoology of Invertebrates .....	121	6	{ Osburn Kraatz }		122	6	{ Osburn Kraatz }	
Microtechnic .....	123	5	Osburn					
Evolution .....	131	10	Krecker		132	7	Krecker	
Ornithology .....					140	7	Hine	
Minor Investigation (Beginning Research).....	141	2	{ Various Members of Staff }		142	2	{ Various Members of Staff }	
Teaching of Zoology .....	145	7	Barrows					
Animal Ecology .....	159	1	Krecker					
Quantitative studies in Animal Behavior .....	153	2	Barrows					



## ENTOMOLOGY

Economic Entomology .....	107	92	(Kennedy Metcalf & Assistants)	108	11	Metcalf
Advanced Entomology .....	113	4	Kennedy	114	3	Metcalf
Agriculture .....	137	1	.....	112	17	Hine
Entomological Literature .....	147	4	Hine	.....	.....	.....
Taxonomy .....	.....	.....	.....	148	2	Osburn
Medical Entomology .....	149	4	Metcalf	.....	.....	.....
Insect Control .....	151	4	Metcalf	152	4	Metcalf
Morphology and Development of Insects .....	.....	.....	.....	162	3	Kennedy

## GRADUATE COURSES—ZOOLOGY AND ENTOMOLOGY

Seminary in Zoology and Entomology .....	201	7	Osburn	202	7	Osburn
Research work in Zoology and Entomology .....	241	7	( Osburn ) ( Osburn )	242	7	( Osburn Osburn )
Invertebrate Zoology .....	247	6	Osburn	248	5	Osburn

The total of registration in the 18 courses given during the first semester was 1112, a much larger number than ever before registered for work in this Department. In the second semester the number dropped off to 746 registrations in 16 courses. The difference is due chiefly to the fact that premedical and dental students take zoology for only one semester and majority agricultural students take only one semester of entomology.

## CHANGES IN CURRICULUM

No changes were made in the curriculum, and I may add that it is the general policy of the Department not to increase the number of courses for undergraduates without very excellent reasons.

## THE LAKE LABORATORY

The season of 1919 was nearly up to the average session prior to the war, with 13 advanced students and investigators in addition to the staff. Four published papers and a Masters thesis have already resulted. Much interest was shown by the investigators present and all are cordially in favor of making the present location permanent.

The 1920 session, just beginning now, bids fair to be the most satisfactory in the history of the Lake Laboratory. Twenty advanced students and investigators were present at the opening, with a possibility that more investigators may come later for a portion of the season. The laboratory space is as fully occupied as it should be and the rented cottage which serves as a residence is much over-crowded, as many as four persons occupying a room. The dining room is also crowded to the limit.

Steps should be taken immediately to provide better living accommodations and a satisfactory laboratory. The proper development of the Laboratory demands this and we have an opportunity, with one of the finest situations in existence, to have the best fresh-water biological laboratory in the world.

## RESEARCH

The Department has given a very good account of itself in research work during the past year, every member of the staff being engaged in investigation and our graduate and other advanced students working on problems.

Professor R. C. Osburn has completed and published his study of the Greenland Bryozoa taken by the Crocker Land Expedition and has nearly ready for publication a study of the same group of animals taken by the Canadian Artic Expedition. A study of the Black-Spot disease of the catfish was made during the summer of 1919 for the U. S. Bureau of Fisheries and is nearly ready for publication.

Professor Herbert Osborn is continuing his studies of the insects affecting meadows and pastures and on the classification and biology of the Homoptera. He will spend the summer at the New York School of Forestry summer camp in the Adirondacks studying the Hemiptera of that region. Prof. Osborn's work in directing the research of advanced students of entomology continues to be as valuable as in the past.

Professor C. L. Metcalf is continuing his studies on the classification, biology and economic importance of the Dipterous family Syrphidae.

Asst. Professor Barrows has completed an important piece of work on the structure of the spiders, which has been accepted as his doctor's dissertation at Harvard University, and has been granted his Ph. D. from that institution.

Asst. Prof. Krecker has investigated the habits and distribution of certain animals at the Lake Laboratory.

Dr. C. H. Kennedy has continued his work on the structural basis of the classification and distribution of the Odonta (Dragon flies) and will probably require another year for the completion of the work. This will be the most important and fundamental work ever done on this group of insects.

Mr. E. L. Wickliff has been engaged in a study of the food of the young black bass, incompleting the work for the M. Sc. degree.

Mr. W. C. Kraatz has completed a study of the fauna of Mirror Lake as his Master's thesis.

Mr. W. V. Balduf studied the insects affecting the soy bean as his Master's thesis.

Mr. P. R. Lowry, a senior, has completed a study of a group of scale insects, which will be published.

Prof. R. C. Osburn has brought about a plan of cooperation with the State Bureau of Fisheries and is already engaged for the summer with a corps of four assistants, in the study of the food and other conditions affecting the economic value of fishes of the state.



Editorial work on scientific Journals is performed by members of the Department, without remuneration, as follows:

Prof. R. C. Osburn, Editor, Transactions American Fisheries Society.

Prof. Herbert Osborn, Editor, Annals, Entomological Society of America.

Asst. Prof. F. H. Kreckler, Editor, Ohio Journal of Science.

#### ADVANCED DEGREES

The master's degree has been granted to four students during the year: Mr. J. A. Basinger, Mr. W. V. Balduf, Mr. E. L. Wickliff and Mr. W. C. Kraatz.

#### PUBLICATIONS BY MEMBERS OF

##### THE DEPARTMENT

- The Farm Fish Pond. Ohio Experiment Station Monthly. Bulletin July, 1919; Bryozoa of the Crocker Land Expedition to Greenland. Bull. Am. Mus. Nat. Hist. Dec., 1919; The Syphrid Fly, *Mesogramma Marginata*, and the Flowers of Apocynum. Ohio Journal. Sci. May, 1920. . . . . Raymond C. Osburn
- The Problem of Permanent Pastures, Proc. Sec. Prom. Agr. Science, 39th annual Meeting; On the Generic Affinities of certain Cicadellidae. Ohio Jour. Sci. March, 1920. Some observation on Insects of the Between-Tide Zone of the N. C. Coast (with Z. P. Metcalf). Annals Entomological Soc. of Am. March, 1920. . . . . Herbert Osborn
- A proposed Nomenclature for the parts of the Posterior respiratory Apparatus of Dipterous Larvae, and a Micro protractor useful in their description. Psyche, XXVI No. 3, The Life Cycle of the Diptera. Annals Ent. Soc. Am. June, 1920. . . . . C. L. Metcalf
- Descriptions of Horseflies from Middle America, I. Ohio Journal of Science, Apr. 1920. . . . . J. S. Hine
- Circulation of the Coelomic Fluid in a Nematode. Biological Bull. Sept., 1919. . . . . F. H. Kreckler
- The remarkable Fauna of a single drop of water, Ohio Journal of Science, Jan., 1920. . . . . W. J. Kostir
- Numerous short articles in Extension Service Bulletin and Experiment Station Monthly. . . . . T. H. Parks (Extension)
- Notes on the genus *Platycoris* Stal (Membracidae) Ohio Journal Science, April, 1920. . . . . H. L. Dozier. (Fellow)

#### EXTENSION

The work of the Extension Entomologist has been of great importance and he has been constantly at work over the state on insect problems at the call of the County Agents and on demonstration projects. Several of the more important phases of the work have been:

1. The wheat survey, which was carried on in collaboration with the State Experiment Station and the State Department of Agriculture. The working out of the fly-free seeding date for different sections of the

state is still an important matter. It is important to note that in counties where there are agricultural agents working under information from the Extension Entomologist, the wheat is much freer from fly than in other counties.

2. Apple insect control. The series of demonstration orchards, established last year, extending across the state from south to north has interested orchardists and stimulated the control of pests.

The work is being continued in connection with the Extension Horticulturist and Plant Pathologist.

3. Clover insect pests. Especially the clover leaf weevil which has in the past two years become a serious menace to the red clover crops in the western half of the state.

4. Potato Spraying Demonstration, for the control of potato insects and diseases, in connection with the Extension Pathologist. Two large commercial fields have been taken in charge, one in Greene County and the other in Sandusky County.

Incidental outbreaks of grasshoppers and other pests have required some attention and considerable correspondence.

Occasional identification of specimens and correspondence has been taken care of by other members of the Department.

Agriculture has demanded more attention than could be provided for. For six weeks we were able to secure the services of Mr. E. G. Baldwin, a very able agriculturist for special work in the field.

Respectfully submitted,

RAYMOND OSBURN,  
*Head of Department.*  
*Director of Lake Laboratory.*



## COLLEGE OF ARTS, PHILOSOPHY AND SCIENCE

*President W. O. THOMPSON, Ohio State University.*

DEAR SIR:—I have the honor to present to the President and Board of Trustees the annual report from the College of Arts, Philosophy and Science for the year ending June 30, 1920:

## ENROLLMENT

The College enrolled 3029 students of whom 428 were in the Summer Session of 1919, and 70 were also enrolled in the College of Education. Of the 2531 in residence during the year (exclusive of the summer) 1694 were men and 834 were women. The rapid growth of the college is shown in the following figures: 1914-15, 1311; 1915-16, 1611; 1916-17, 1787; 1917-18, 1710; 1918-19, 2182; 1919-20, 3029.

## EMERGENCY APPOINTMENTS

The stress caused by overcrowded conditions was relieved in part by the emergency Board appropriation which enabled us to add seven instructors and assistants to the English staff, six in Romance Languages, and one each in American and European History.

## MORALE

The universities of the country east and west alike suffered a loss in scholarship standards during the war, and have not yet fully regained their former status. During the last two years conditions have been discouraging to the impatient.

Men returning from military service have found great difficulty in resuming study. Some have failed through inability to apply themselves. The uneventful life of a university has proved intolerable to those accustomed to camps. There are instances in which students have withdrawn and returned twice in one semester only to fail in the end. The spirit of restlessness has not been confined to ex-soldiers. It has been quite general; but some have been affected in a directly opposite way. All instructors report extremes. The diligent students are more diligent than ever. The pleasure-seekers have been more intemperate in pleasure-seeking and more numerous than ever. There have been no rebellious outbreaks or unseemly assertions of the student will, as in several other large universities.

Among the faculty, research and study have been sadly interfered with by the coal famine and the early closing of the university at night, by the influenza epidemic, and by the general spirit of relaxation following the war-effort. Many more students have been put on probation than in previous years, and a greater percentage have "failed out" than in normal times. From this condition relief will come only gradually.

The most potent cause of demoralization has been the frequent changes in the teaching personnel caused by the epidemic, and by resignations from the teaching staff. The second most potent cause has been discontent in the teaching staff over insufficient salaries. Both of these causes have ceased to operate in full strength and with better prospects a better spirit began to appear before the year closed.

Some undue severity in the rating of students is chargeable to faculty instability. Student complaints over ratings were never so numerous.

Some apparently had just reason for complaint. This condition is quite general in the large universities this year.

Testing by the percentage of students sent home for failing to pass their work, this college has been more severe in 1919-20 than the Liberal Arts Colleges of Michigan, Wisconsin, and Iowa and not so severe as those of Minnesota and Indiana.

In spite of all this, however, a vast amount of good work has been accomplished and improved conditions may be expected the coming year.

Faculty morale was benefited during the year by the presence of the Association of American Universities and the Modern Language Association of America. The sessions of both organizations were well attended by members of this college, some of whom took part in the discussions.

#### USE OF INTELLIGENCE TESTS

The results of the intelligence tests have been found useful in the following ways:

1. A student whose semester grades are below the grade attained in the intelligence test understands the necessity of better work in his studies when presented with the contrast. Rules are enforced with greater assurance. Serious illness is a valid excuse for the disparity only for a limited period. Outside employment is an explanation and results in a reduction of the college hours permitted if outside employment must be continued. The capable but lazy student is convicted by the intelligence rating.
2. The intelligence test confirms the judgment of instructors on students marked "failed" or "conditioned" or merely "passed", in more than one subject. There is no doubt except in the case of a single low mark which may be due to exceptional circumstances, such as sudden illness, temporary unfitness through hurry, tardiness at the examination, fatigue from mental effort in an examination immediately preceding. In such cases the explanation is valid.
3. The intelligence test is utilized least often administratively in the case of the middle 50 percent of the student body whose rating remains steadily "average".
4. In general the intelligence test is the means by which the independent judgment of administrative offices is confirmed and suitable action in enforcing the rules determined upon. It is the means of stimulating on the part of such officers interest in the individual student whose case requires further investigation.
5. Further uses of the tests will doubtless be revealed as time goes on and as the tests are modified and refined by experience. If applied generally in the secondary schools they might afford sufficient proof of unfitness for college work in some instances and save much waste of time and misdirection of effort.



## SPECIAL STUDENTS

The evil of admitting poorly prepared young people, who happen to be 21 years of age, to regular freshman classes has been corrected by the adoption of the following regulations:

- I. All applications for admission must be filed at least 10 days before the opening of the semester.
- II. Application must be accompanied by a certificate from former teachers or from schools previously attended, or when this is not possible, from some one of authority, attesting age and good character and scholastic attainment.
- III. The applicant must present an adequate statement for himself of his previous education, his special qualifications for pursuing the course he seeks and a description of the course he has planned. This petition must be passed upon by the Executive Committee before the Entrance Board will endorse the application.
- IV. The applicant may be required to prove by examination that he is prepared to undertake with profit the courses which he proposes as his chief study.
- V. Unless the applicant is 23 years of age or more he will not be admitted as a special student to a curriculum composed entirely of courses open to first year students in his college.
- VI. If a student has been regularly admitted to the University, he will not be transferred to the classification "special" upon reaching the age of 21 years so as to enable him to enjoy the liberty of a special student save under very exceptional conditions.

## DEANS OF MEN

The colleges have come to a feeling of responsibility for the whole life of the student. Interference with extra curriculum activities has greatly increased. This is not merely for the purpose of preventing abuses that would always be subject to discipline in any self-respecting institution. It is the college phase of the general uplift movement to be seen everywhere in the world today. It means a determination to use all possible means to raise the level of individual and community life. Faculties never did underrate the influence of the curriculum, the classroom, and the purely official relationships of students with teachers, and they do not underrate the influence of these as educational instruments now.

The new point of view, however, implies the very great importance of considering, and even of supervising and in a measure directing officially, that large portion of the student's life not occupied with the duties of the curriculum. All of this also is to be turned to high account rather than left to hap-hazard. The right of the college to attempt this is not in question; the laudable purpose in it is undoubted; but there is serious doubt, in some minds as to the expediency of it and as to the final effect upon individual and social character.

Certain qualities hitherto highly prized as peculiarly American, self-direction, self-reliance, independent judgment, are not likely to be developed so easily when the college actually puts itself in *loco parentis*.

In some institutions the situation is met by the appointment of a Dean of Men, who unifies the efforts of all organized and voluntary agencies for good outside of the classroom, keeps track of students, studies their needs, helps them in trouble, acts as chief member of the discipline committee, and by his influence creates sound public sentiment and controls to a degree the lives and activities of the students.

The problem is easier of solution in a small town where college life is concentrated than in a city university. In the latter, even with the aid of an expensive dormitory system, the administration of such an office by one person would be much more difficult. It is proposed in universities thus situated to enlist the aid of all of the instructors, especially the younger instructors who have a natural aptitude for such service, and possibly to make them assistant deans of colleges. Many of them would enter eagerly upon this work of real companionship with students and good would come of it. The specialization of this function would, however, be sure to operate unfavorably upon those of the faculty who held aloof, either because they begrudge time taken from study and research or from individualistic prepossessions.

The work is being done, very effectually so far as it goes, in an unorganized way in every university where official recognition is not yet accorded it. This is true wherever personal influence over student sentiment is actively exercised by instructors, wherever deep concern is felt that all properly advised and guided, in other words, wherever the true spirit of teaching in its widest sense prevails.

The classroom opportunity is open to every instructor. It certainly is not utilized when, for example, students express themselves as uncertain whether an instructor regards cheating as a serious offense or not. The problem is not solved by adding to the list of officials. With or without the official title it may be solved by a broader conception of the office of teacher.

#### VOCATIONAL COURSES

The College should have no fear of the so-called vocational courses. In a sense, the Arts College of the olden time was vocational. Its courses contemplated as the goal of education the three learned professions; later the business of teaching, also; and still more recently, commerce, administration, journalism, etc. The fact that a subject (say stenography, or elocution, or cooking) may be used for earning money later should not count for or against its admission as a credit subject to the college curriculum. Our practice is to permit a total of twenty semester hours out of the 120 required for the degree in Arts to be elected from any subject upon which the student is prepared to enter, including, of course, subjects termed "vocational." Comparatively few of our students, however, avail themselves of the privilege. Those who do are usually working for two degrees. Those students who transfer to us from other



institutions are compelled to make less of a sacrifice by reason of the twenty-hour rule. In fact the twenty-hour rule is proof of the imperfect organization of higher education and a great convenience in making necessary adjustments in individual cases.

#### DEPARTMENT MEETINGS

When several instructors are teaching sections of the same class (e. g. Freshman English, Introduction to English Literature), (Freshman Chemistry, and the like) the most experienced is made director of the course, and weekly meetings of the instructors are held, to the advantage of the younger and less experienced teachers. Especially in large departments this tends to clearness of purpose, selection of the most fruitful parts of the subject matter, personal interest in the students and the development of good team work. All of our large departments hold such meetings for the discussion of pedagogical and other problems. The visitation of classes is also becoming more common and the supervising of the younger by the older teachers is increasing in this college.

#### COMBINATION COURSES

We frankly accept the principle of combination courses, not primarily to shorten the period of study for the average student, but as a recognition of superior attainment and ability. For students of higher than average ability, we have numerous combination courses leading to two degrees. In Arts-Law, Arts-Medicine, Arts-Agriculture, Arts-Education, Arts-Engineering, Arts-Domestic Science, a student who spends three years in Arts, fulfilling all the requirements of the Arts degree up to the fourth year and also completing certain specified studies thought or known to be essential to the prosecution of the professional curriculum, may, if in no respect below the average in his studies, count as his senior year in Arts the first year of the professional course.

The numbers in these courses are increasing (see report of the Registrar). It is becoming the rule rather than the exception for students intending to teach to try for two degrees. Economic pressure compels many to secure the education degree first. It happens frequently that students enter a combination program only as a result of a complete change in plans late in their course.

#### AN EXHIBIT

For the first time in our history, and, so far as can be ascertained, in the history of any college, this college recently prepared an exhibit of the complete individual curricula of the first ninety seniors applying for a degree at the commencement of 1920. This document is filed herewith as a part of the first report. There is no further need of guess work as to the results of the group-elective system.

An examination of the curricula will lead to the following conclusions:

1. The curricula are satisfactory from the point of view of concentration. Only fifteen of the ninety seniors failed to take twenty or more hours in some one department and, of these fifteen, ten were transfers from smaller colleges offering no opportunity for as much as twenty hours in any one department beyond the freshman year. These cases tend to prove the contention of those who hold that a student transferring from another college should be required to take two years of work in residence here before being granted a degree. At present the requirement is one year.
2. The curricula are satisfactory from the point of view of distribution. The widest distribution does not show as much scattering of energy as is compelled in colleges having completely prescribed curricula.
3. Curricula possibly unsatisfactory in one feature are those showing a single entry of 8 or 6 in the science group, such as numbers 3, 4, 5, 6, 14. It is evident that the student here made a poor choice or was not impelled to continue the study into its more advanced regions. Unsatisfactory also are curricula in the foreign language group shown two 8's, such as numbers 13, 16, 18, 21. This means a single year in each of two foreign languages instead of two years in one foreign language. This evil will be corrected by faculty action.
4. It is easy to see that most of the curricula are chosen advisedly and show definite purpose. There is little ground for assuming that results would be better if curricula were more closely prescribed in this college. In fact, it would be impossible until the public high schools provide fixed curricula.
5. The curricula show that very few seniors aim at the bare minimum of 120 hours. Most of them have hours to spare.



EXHIBIT OF THE COMPLETE FOUR-YEAR  
INDIVIDUAL CURRICULA OF 90 SENIORS

\*CLASS OF 1920

- Note: (a) The numbers across the top of the page are for identification. Each represents a senior. Other numbers are semester hours.
- (b) Each column represents one student's complete curriculum. Read from top to bottom noting concentration, distribution, number of departments touched, coherence of the individual curriculum.
- (c) The departments are in order: Languages, Biological Sciences, Non-biological Sciences, Social Sciences, etc., so that you can see each student's major group and minor group, as well as amount of work outside the groups.
- (d) Note seniors number 7, 15, 26, 28, 32, 37, 41, 81, 83, 89. They are transfers from smaller Colleges and show the widest distribution. Numbers 21, 27, 46, 58, and 90 are the only others who do not show a subject-major of at least 20 hours as well as a group major of 36 or more and group minor of 18 or more.
- (e) Note the final totals: A total over 128 hours indicates usually a five-year combination program.
- (f) What improvement in any individual curriculum could have been secured by previous general legislation that would have done no harm to the majority?

STUDENT NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
English .....	31	43	38	27	10	49	17	12	14	28	26	4	38	36	25
German .....	8		10					12	16			16	8*	4	16
Latin .....		8									16				
French .....	12	22	14	16	18	18	16		8	8	36	16	8	16	
Spanish .....				16	22		24			8	8				
Anatomy .....															
Bacteriology .....															
Botany .....			6			8	8					8		6	14
Physiology .....	6	6		6			6	3	6	6		6	6		
Zoology .....					9			6			6			6	
Astronomy .....		6	6		6										
Chemistry .....	8	4					12	8				16		8	
Geology .....	6			6		6				6					
Physics .....		8						3							
American History .....		6		6			6		6	6					
European History .....	36		14	6	10	10	6	6	13	30			6	12	12
Political Science .....				9	6		6	11	3	6					
Economics .....		6	6	24	12		12	26	9				6	10	
Sociology .....	6	6	24	6	25			6		12	6	6	9	12	6
Mathematics .....		6						10							
Philosophy .....	3	3	12	3		23		9	24	3	10	8	18	12	13
Psychology .....	6	6		6	6	6	6	8	18	8	18	34	14		12
Education .....	21								5					22	
Art .....	16		2		1	1	4					9			19
Home Economics .....							14					14			7
R. O. T. C. ....															
Total .....	151	130	132	131	125	121	122	120	122	123	126	137	135	122	124

\*Greek

STUDENT No.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
English.....	10	31	16	9	11	20	7	4	6	18	11	16	16	16	35
German.....				10					16	24		16	16	15	....
Latin.....											9				....
French.....	8	16	8	36		8	8	6	9	8	4	8	16	40	....
Spanish.....	8	8	8	22	12	8	8			8				It 4	22
Anatomy.....							8								....
Bacteriology.....									6		8				....
Botany.....				9	8										....
Physiology.....	6		6			6	6				6	6	3	6	6
Zoology.....		8					3	6		6	6				6
Astronomy.....															....
Chemistry.....		8			54	8	13		52			8	8		....
Geology.....	12		12					6		6	6				6
Physics.....					10	8	9	8	10		3				....
American History.....		6		12	6	6	6				19	16		6	....
European History.....	18		18	10	6	18	3	6		10	2		6		8
Political Science.....							6	6			6	6			....
Economics.....					6	18	25	33	6	15	9	6	3		....
Sociology.....	21	6	21	9		6	6	6		6		11			36
Mathematics.....		10							6	20	10	10	15	10	....
Philosophy.....	6		6	6	20	6		3			15	2	6	15	....
Psychology.....	16	12	16			6	6	8	6	10	6	6	8	10	8
Education.....		9													9
Art.....			1					2							....
Home Economics.....															....
R. O. T. C.....							8	8				8	7		....
Total.....	114	114	121	123	126	118	122	118	128	121	120	119	132	129	138



STUDENT NO.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
English.....	32	4	4	10	4	39	24	26	10	12	10	10	18	12	18
German.....		11	16	12	16	16			28	*10	8	*16	*8		
Latin.....	8										10		22		39
French.....	24	16	8	19		16	16	16	24	20	19	16	16	26	8
Spanish.....								8		It8	8			8	
Anatomy.....		3				30						16			
Bacteriology.....		5				6									
Botany.....			6	8					22		8	8			
Physiology.....	6	6	6		24	7	6		6	6	4		6		6
Zoology.....		4				6		9	9	6		2	35		8
Astronomy.....															
Chemistry.....		24	8		13		8		4	8				16	8
Geology.....							6	6	6		6		6		6
Physics.....		16				4								8	8
American History.....	16	8	6	6	6	6	1	1						9	8
European History.....	12	4					3		6	6		14	6		13
Political Science.....		2												6	
Economics.....	6	5	6				3	6	15	6	15	3			9
Sociology.....	6	5	23	20				12	16	6		6	3	6	4
Mathematics.....		8	20								40				8
Philosophy.....							10	6		12			6	12	4
Psychology.....	10		6	14	6	10	9	6	8	6	13	6	10		10
Education.....	6		6	15			6		6						21
Art.....		2	1			4		4			1	1	1		
Home Economics.....							10								
R. O. T. C.....			4									8			
* Total.....	130	122	120	143	131	124	123	121	132	138	120	123	123	117	143

\*Greek

STUDENT NO.	46	47	48	49	50	51	52	53	54	55	59	57	58	59	60
English.....	9	10	4	14	43	*32	16	7	12	36	18	33	15	6	31
German.....	It 8	16	16	8	8	8		* 6							
Latin.....	1				6			6		5	8			8	
French.....	8		8	8	8	16	16		18	11	26	16	16	8	14
Spanish.....	16			8				16	26	8	16	8	6		
Anatomy.....	3														
Bacteriology.....														3	
Botany.....		33			8				11						
Physiology.....	12	6	7			10	6				6		2	3	11
Zoology.....	3	12		6						8		8	4	33	6
Astronomy.....									6						
Chemistry.....	18	8	45			4	8	16		10		8	12	13	
Geology.....	8	6	3		6	6	3	12						3	
Physics.....	12		3											8	
American History.....	6	8		12	6			6	6		6	6		6	8
European History.....			3	28	6	10		16		8			11		27
Political Science.....				6	6		6	6					5	6	
Economics.....	3		6	6	6	6	28	21	6	6	12	3	15	9	6
Sociology.....	6	6		6	6	22	6	2	6	6	6	6	2		17
Mathematics.....		3	20				20		16		22	10	10	3	
Philosophy.....		3		12	6	4	3	6	12	9	6	4		3	
Psychology.....	19	10		10	16	6	8	6		12	6	12		6	9
Education.....		18			18							9	6		
Art.....		1				1			4	6		1		1	
Home Economics.....												6			
R. O. T. C.....							8						8		
Total.....	132	148	123	124	141	125	128	120	123	125	138	125	119	119	132

\*Greek



STUDENT NO.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
English . . . . .	30	22	14	...	35	10	10	10	14	30	48	16	20	36	20
German . . . . .	...	...	6	20	...	22	16	8	24	6	10	4	...	...	...
Latin . . . . .	...	...	...	...	...	It8	...	8	...	6	2	6	6	...	...
French . . . . .	20	8	...	8	20	...	20	...	...	...	It8	8	14	8	8
Spanish . . . . .	...	...	8	...	...	8	16	...	8	...	8	...	...	12	16
Anatomy . . . . .	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...
Bacteriology . . . . .	...	...	13	...	...	...	...	...	5	...	...	...	24	...	...
Botany . . . . .	...	...	8	...	...	...	...	...	...	7	...	...	...	...	...
Physiology . . . . .	6	6	6	6	6	8	16	6	2	4	6	...	6	6	...
Zoology . . . . .	...	...	10	...	...	...	...	6	6	...	6	3	6	...	...
Astronomy . . . . .	...	...	...	...	...	...	...	...	6	...	...	...	...	...	...
Chemistry . . . . .	...	6	23	8	...	...	...	8	...	3	...	12	8	...	...
Geology . . . . .	...	...	...	...	...	...	...	8	...	...	6	...	...	6	6
Physics . . . . .	...	...	...	23	...	14	...	30	...	...	...	4	4	4	...
American History . . . . .	12	...	...	...	...	...	...	...	14	...	...	...	...	...	...
European History . . . . .	14	10	...	...	16	6	36	6	30	10	6	6	9	12	6
Political Science . . . . .	12	...	...	...	...	...	...	...	10	6	...	...	...	...	11
Economics . . . . .	24	...	5	15	...	...	...	...	6	46	3	6	6	...	18
Sociology . . . . .	...	12	8	...	3	...	9	6	6	8	15	23	6	21	...
Mathematics . . . . .	10	...	3	20	...	42	...	22	...	3	...	...	6	...	8
Philosophy . . . . .	...	6	3	...	6	3	...	...	...	...	6	6	...	6	6
Psychology . . . . .	...	51	6	...	12	6	10	10	10	6	6	27	6	14	6
Education . . . . .	...	...	...	...	18	...	18	18	15	...	...	...	...	...	8
Art . . . . .	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...
Home Economics . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
R. O. T. C. . . . .	...	...	...	8	...	...	...	...	...	...	...	...	...	...	8
Total . . . . .	128	121	124	154	120	127	151	138	156	142	130	115	121	126	120

†Engineering

STUDENT No.	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
English .....	23	20	7	11	16	4	12	17	24	16	17	35	18	18	10
German .....		4	16	12	16		16	16	8	16	*20		16	6	
Latin .....					16			13					6		
French .....	16	28	16			18		16	8	4	22	22			
Spanish .....		25					8					8		8	16
Anatomy .....			36	3											
Bacteriology .....						4									
Botany .....					4			6		42	3			11	
Physiology .....	6		36	3		6	10		6		6	6		9	6
Zoology .....			3	6	36	6				6	3			6	9
Astronomy .....	6	6											3		
Chemistry .....			16	13		16	8	8	8		8	8	7	3	8
Geology .....			6		8	9								6	
Physics .....		4	6	12				2							
American History .....	3	6					10		10	6	3			3	6
European History .....	6	2		7	6	3	6	6	12			18	14		24
Political Science .....	7	8		3	14	3	6		12			6			6
Economics .....	10		6	4	6	12	20	6	20	6	12		11	21	12
Sociology .....	6	6			12	3		9			3		12	6	3
Mathematics .....		3	25	32			6	3		6			6	3	
Philosophy .....	35	9			12	3		3	6						
Psychology .....	8		6			6	10	6		6	18	12		8	6
Education .....				8		8	3				5			3	10
Art .....								1		4		1	2	3	
Home Economics .....						14									
R. O. T. C. ....				6					8						
Total .....	126	121	116	120	116	129	123	113	122	118	120	113	92	114	116

\*Greek



## THE DEPARTMENTS

## LANGUAGES

In all colleges of the country the requirement in the languages (exclusive of English) has diminished by one-half in the last thirty years. The old minimum requirement was generally the equivalent of six preparatory units and four college units divided between two languages. The present requirement is three or four preparatory units and two college units. In a few institutions like Wisconsin and Michigan it is even less than this. The tendency through the country is to allow choice of languages but to insist upon concentration on one foreign language rather than to permit the time to be divided among several.

The universities have never provided a sufficient number of instructors to secure the best results in the elementary work, especially in Freshman composition. One of two courses should be followed,—either the requirement of Freshman composition should be given up entirely, or a larger number of instructors should be supplied. In the Ohio State University the English Department had a total enrollment of 4142 the first semester and 4055 the second semester. In composition writing there were 2806 the first semester and 2650 the second semester. Instructors in composition were provided by the budget for 2000 in sections not exceeding 50 each. The remainder, consisting of those who on examination were found to be able to write fairly well, were assembled in three large reading sections and had the opportunity of very little practice in composition.

The Agricultural and Engineering Freshmen are segregated by their schedules. It is the practice to permit a wide range of selection in theme topics. About half the requirement of readings is in agricultural or engineering subjects. Each student will average six hundred words a week. The proportion of themes on agricultural or engineering topics is about fifty percent. The topics call for non-technical treatment at this early stage of the student's professional course. The instructors are not people of technical information in agriculture or engineering; but this is conducive to better writing by the student. The illiterate are not dropped from college but are offered opportunities to repeat elementary courses. For foreigners a special section has been voluntarily conducted by Miss Dollinger with excellent results. For the coming year six additional instructors should be provided, and ten additional assistants, if this work is to be well done.

The English Department regrets the resignation of Assistant Professor Louis A. Cooper after twelve years of service. Professor Cooper withdraws from teaching entirely. After a period of rest and travel he will engage in

literary work. Professor Cooper has exercised a deep influence for good in his large classes, and the department and the profession suffer a distinct loss through his resignation.

By the return of Professor C. E. Andrews from military service the department has been able to resume courses that were suspended during his absence. Professor Andrews' book on "The Reading and Writing of Poetry", published during his absence, has proved a distinct addition to the authoritative literature of poetics.

#### GERMAN

The number studying German was double that of the preceding year. The total is low but the same is true in all universities. No considerable increase in the advanced courses here can reasonably be expected until the law excluding German from the high schools is modified.

#### LATIN

The enrollment in Latin has increased ten percent, or more, over the year 1918-19. The increase is in the freshman work. The department enrolls a considerable number of teachers in its higher and graduate courses. The department plans to increase its offerings in the summer session for the benefit of teachers of Latin.

#### GREEK

The total registration was 52, a marked increase over previous years. With the return of normal conditions in education it is believed that this increase will continue. The department is in need of better library facilities for its graduate courses.

#### FRENCH AND SPANISH

The death of Professor Benjamin Lester Bowen, for thirty-one years head of the department of Romance Languages and Literatures occurred June 28, 1920. The biography of Professor Bowen and Faculty resolutions are appended as part of this report. Professor Ingraham served as Acting Head of the department from January until May when, in view of his resignation from the University, to take effect July 1, Assistant Professor Rockwood was appointed to succeed him. Through the faithful and persistent efforts of these men the loss to the department by reason of Professor Bowen's absence was reduced to a minimum and appointments for the coming year have been promptly made which will preserve without interruption the high standards of the department. The resignation of Professor Ingraham, who discontinues teaching to enter other pursuits, is a distinct loss to the department and to the university. Two productive scholars will be added to the staff: Professor Hendrix, late of the University of Texas, in Spanish, and (in French) Professor Moore, late of the University of Illinois and Northwestern University. The enrollment in French (1798-1279) has returned to normal, showing a decrease of twenty percent below last year but the enrollment in Spanish (1349-984) has more than doubled.



## THE BIOLOGICAL SCIENCES

## ANATOMY

The advanced work in this department is taken mainly by students of this college making a three or four-year preparation for medicine or for college teaching. The number in the elementary courses has increased with the increased number of two-year pre-medical students for whom this is a required study.

## BACTERIOLOGY

This department is accessible to students of the College of Arts, Philosophy and Science, not earlier than the junior year, in the main. It is fortunate that the department will not feel the effect of the great increase in numbers of Freshmen before another year has passed. In general bacteriology there were 137 students and in medical bacteriology 23. Bacteriology is usually elected by students obtaining the three-year preparation for medicine.

## PHYSIOLOGY

The course in general physiology is elected by hundreds of Arts students in fulfillment of their biological science requirement. More laboratory work is desired for these students but until more assistance, space, and equipment are provided, the department will not be able to make provision for it. The department has to its credit ten scientific papers read before national or state associations during the year; six scientific articles in the journals (not including popular articles) and seven specific investigations and studies under way.

## PUBLIC HEALTH

One hundred and three students of the College of Arts, Philosophy and Science were enrolled in the department of Public Health and Sanitation. This was about one-half of the total registration. The largest numbers were in the courses in Personal Hygiene and Industrial Hygiene. Of those enrolled in Industrial Hygiene 27 were women looking forward to sociological work or making sociological studies. The work of this department will be greatly increased by the addition to physical education requirements adopted by the Faculty.

## ZOOLOGY

About one-third of the registrations in this department are students of this college, there being 360 Arts students the first semester and 218 the second. The difference between these figures represents approximately the number of Arts students who are pursuing the study for other than pre-medical requirements. All of the advanced courses show about the same proportion (one-third) of Arts students. Twenty advanced and graduate students are at the Lake Laboratory of 1920. There is the opportunity, if enlarged facilities are granted, to make the Lake Laboratory the finest fresh-water biological laboratory in the work on account of the superior location. The department has to its credit fourteen scientific studies and articles published during the year.

## THE NON-BIOLOGICAL SCIENCES

## ASTRONOMY

The enrollment in the department was 123 for the first semester and 97 for the second semester. The courses in general astronomy taken by Arts students numbered 89 and 67. The observatory is open to the public on the first and third Wednesdays of each month and if the night is clear and the weather not too cold the attendance is too great for achieving the best results. It may be necessary to adopt a system of admission only by ticket previously obtained or spoken for. An illustrated lecture is given to one group of visitors in the lecture room while another group visits the dome. The observations of double stars is being continued by the director and the results published in the *Astronomical Journal*. In addition two scientific papers stand to the credit of the director this year.

## CHEMISTRY

This science is elected more numerously than any other by Arts student fulfilling science requirements for a degree and more continue their selections throughout the course. The department suffers for lack of room, as is well known. The work in physical chemistry is an elective preferred by pre-medical students when they have hours to spare by reason of advanced standing.

## GEOLOGY

The department is overcrowded, freshman sections numbering 75 each. The enrollment in advanced classes is regaining pre-war figures. Courses in Geography have been given for the first time this year. The Edward Orton Memorial Library has proved to be a valuable help in the department work. It is already one of the best libraries of the kind in the country. The resignation of Professor Thomas M. Hills entails a great loss to the department. Professor Hills will head the department at Vassar College. The work that he leaves will be conducted by Mr. Robert F. Webb of Harvard. The department needs additional instructors.

## PHYSICS

About 280 Arts students were enrolled in Physics the first semester and 197 the second semester, a very large increase over any previous year. The laboratory space and equipment have been taxed to the limit to provide for so large a number. The removal of the Arts laboratory from the third floor to the first floor of the building would enable the department to shift needed apparatus from one laboratory to another with less labor and inconvenience. The experiment of uniting several sections for a demonstration lecture once a week has been tried this year with good results.

## APPLIED OPTICS

The department has graduated its first four-year class, numbering eight. The department has had a prosperous and satisfactory year under its new head, Professor Howard D. Minchin.



## SOCIAL SCIENCES

## AMERICAN HISTORY

The return of Professor Hockett from a year's leave of absence at the University of Pennsylvania will in part meet the growing needs of the department. In addition, Professor George W. Knight will devote his entire attention to the department. The vacancy caused by the resignation of Professor Schlesinger was filled by the appointment of Professor Boucher whose services have been eminently satisfactory

## EUROPEAN HISTORY

The total enrollment was 757 the first semester and 642 the second semester. Seven of the sections in courses 101-102 were overcrowded. Professor J. R. Knipfing has been appointed a traveling Fellow by the Commission for Belgian Relief to carry on research at one of the Belgian universities during the year 1920-21. The department is obliged to increase its work by offering course 102 hereafter in the first as well as the second semester and 101 in the second semester. The pressure of numbers will necessitate the adoption of the lecture-quiz system in the history departments in the near future.

## ECONOMICS AND SOCIOLOGY

This department has suffered more than any other by losses from its staff through the competitions of business and of other universities for its men. It has been impossible to obtain for the elementary work instructors of desired academic experience and scholarship as fast as vacancies have occurred. Besides, the enrollment has increased inordinately and a very serious problem is presented for the future. In some sections there have been two instructors in a single semester. The advanced courses as well as the elementary courses have been overcrowded. The return of Professor Hammond to university duty was especially grateful to advanced students of this college; but they share also in the losses occasioned by the resignation of such men as Professors Ruggles and Lockhart.

## POLITICAL SCIENCE

The department lost by resignation in July, 1919, Professor E. A. Cottrell, who accepted a professorship in Leland Stanford Jr., University. Owing to financial stringency the vacancy was not filled and the Bureau of Municipal Government and Administration which Professor Cottrell was ready to establish and which he was remarkably equipped by education and experience to develop failed of realization. As soon as a suitable successor can be found Professor Cottrell's position should be filled, the bureau established and the department restored to the condition contemplated by his appointment. One of Professor Cottrell's courses was dropped, one was divided between Professors Spencer and Coker and the year was begun with the help of a part-time assistant. In the middle of January, Professor Coker's health failed and he was compelled to ask

for a leave of absence. Two courses were dropped, the sections of the elementary course were combined for lecture, and Professor Spencer with the voluntary assistance of Professors McNeal and Perkins for one month and the help of an additional assistant thereafter, carried the department work through the year. The increase in numbers in the department will render permanent the adoption of the lecture-quiz plan in the elementary courses.

#### MATHEMATICS—PHILOSOPHY—PSYCHOLOGY

##### MATHEMATICS

About 350 students of Arts, Philosophy and Science elected courses in Mathematics during the year just closed of whom 82 preferred the five-hour courses designed primarily for Engineers. The showing discredits, the general belief among the unmathematical that mathematics prospers only as it is compulsory. The most advanced work in mathematics for which the few are capable is taken by Arts students.

##### PHILOSOPHY

The department enrolled 350 students the first semester and 374 the second semester. Ten years ago the total was 86 for the year. The department has withdrawn all of its courses from election by Freshmen, finding that too large a proportion of the Freshmen are incapable of doing satisfactory work in Philosophy. The Faculty of the College has agreed to this action.

##### PSYCHOLOGY

The result of the action just noted will be an increased enrollment in the department of Psychology which is already overcrowded. It may be necessary to transfer one man from the staff in Philosophy to the Psychology staff or to take equivalent action.

##### ART

Provision has been made in the curriculum by which students coming to the University to study Art may begin their work in the first year, instead of waiting until their third year. In taking this action the Faculty made general a privilege heretofore granted only by special petition. Those availing themselves of this privilege are usually not intending to prepare for teaching but are pursuing the study for its own sake as a major interest, in their education. The number of Arts students taking one or more elective courses in the department of Art in the latter part of their course has been increasing rapidly in the last few years.

##### PROSPECTS

Increase in attendance has come to be regarded with apprehension. Insufficient accommodations, insufficient resources to provide the number of instructors needed, make a large increase in attendance a very serious problem. Until the state provides more liberally for higher education there



will be little prospect of eliminating existing evils or of bringing the average quality of university work to the level desired. There is, however, no lack of courage and resolution to make the best of conditions as they are until better conditions can be created.

Respectfully Submitted,

J. V. DENNEY,  
*Dean.*

## APPENDIX

## BENJAMIN LESTER BOWEN

Resolutions on the death of Professor Benjamin L. Bowen were adopted at a meeting of the Faculty of the College of Arts Tuesday afternoon, June 29, 1920, as follows:

The Faculty of Arts, Philosophy and Science has learned with profound sorrow of the death of Professor Benjamin Lester Bowen and hereby places on record its appreciation of his character and services.

For 31 years Professor Bowen has served the Ohio State University with distinction as head of the department of Romance Languages and Literatures. For this important position Professor Bowen was remarkably well fitted. Graduating from the University of Rochester in 1881 at the age of 21, he spent the next seven years in graduate study, four at the Johns Hopkins University where he was also assistant in French, and three years at foreign universities—Paris, Bonn, Rome, and Madrid. Johns Hopkins University conferred the degree of doctor of philosophy upon Professor Bowen in 1888, and after one year as professor of French and Latin at Bowdoin College, he was called to the Ohio State University, where he has since guided the development of the department of Romance Languages and Literatures.

Professor Bowen's work was coincident with the greatest growth of the University. His fidelity to the highest ideals of the scholar and the professor is attested by the strength and character of the department which he built up, by the breadth of its curriculum and the quality of its faculty and its students.

He was influential in the national councils which determine the policies that are pursued in departments of modern languages in American universities. He served on important committees of the Modern Language Association of America, the American Philological Association, the American Dialect Society and on the joint committee on grammatical nomenclature. Professor Bowen's work as author and editor of texts was marked by accuracy, scholarly care and the wisdom of the experienced teacher. His contributions to Modern Language Notes, Dialect Notes and other learned journals, and his papers read at meetings of the associations indicate his constant devotion to literature, scholarship and the cause of higher culture. All of these activities, as well as his vacation periods of foreign travel and study, Professor Bowen regarded not merely as a pleasure, but as a necessary part of his duty as a representative professor in a great state university.

No man ever respected more highly the best ideals of the profession of University teaching or resented more keenly tendencies in the profession that threatened to lower it and impair its power for good in human society.



His students, as well as his colleagues, sensed the dignity of the scholar in his teaching and respected his devotion to the best standards in learning and in life.

In his relations with his colleagues in the faculties of the University, Professor Bowen was fair-minded and courteous, but always insistent upon preserving the best and highest traditions in University education. We, the members of the Faculty of Arts, Philosophy, and Science, especially, will long honor the memory of this sincere friend and devoted scholar; we prize the example of high seriousness that he set before us constantly in his attitude to the cause of learning and culture; and we address ourselves henceforth to our several duties with a nobler resolution because Benjamin Lester Bowen has so many years been one of our membership.

J. V. DENNEY,  
S. C. DERBY,  
R. E. ROCKWOOD,  
M. B. EVANS,  
G. W. KNIGHT.

---

#### A SCHOLAR-TEACHER

News of the passing of Professor Bowen will bring a touch of sorrow to thousands of former students now scattered over the world. They will pause in their work. They will recall him as he taught in his classroom. Some familiar phrase of his will flash into memory—some tone of voice, some favorite accent or idea, perhaps some word of commendation or admonition, possibly some moment of eloquent silence.

Now, in years of greater maturity, they will see what this painstaking professor was trying to do for them in their days of callow inexperience. Many will be grateful for the initiation that he gave them into matters of good taste and discrimination. Some who have gone far in the pursuit of literature and scholarship will be truly thankful that they were early guided by a real scholar who knew the safe and trustworthy roads to follow and who refused to be allured into byways of the ephemeral. And all will recall Professor Bowen's constant faithfulness in the office of teacher—his persistence in training students to respect truth and accuracy, good form and fineness. He was of the elder race of gentleman professors. To all, at last, comes the understanding that what this quiet, unassuming scholar was working to develop in every student was personal capacity, personal quality, personal character. Using the Romance languages as his medium and his instrument, he was steadily training all of the forces that make for personal worth.

In 30 years of teaching every professor is sure to affect for better or for worse the lives of many young people. And, contrary to general opinion, the influence of a master in charge of a crowded class is increased rather than diminished. There is a fallacy based upon arithmetic rather

than upon psychology that the personal interest of the professor in his students is in inverse ratio to their numbers. An old graduate will express surprise if recognized after years of absence and promptly called by name. But the thing is scientific enough.

There is no mystery in the fact that real personality is always memorable. The relation of such a teacher as Professor Bowen to his student is constantly revealing to both the personal and individual traits of each. A constant interchange, only partly spoken, is going on. Teaching is a matter of pairs, however crowded the classroom, and the instructor is one of each pair. There are as many audiences as there are students present. No student is ever "lost in the crowd" if a real man is at the front.

Scientifically true it is, and not merely a trite piece of consoling rhetoric, that the real worth of the scholar-teacher is in his influence on other lives. Could the thousands who have passed under the influence of Professor Bowen for even a single course now assemble and give the testimony which is in their hearts, as they read of his death and make their silent inventories of past years, no doubt would remain in the mind of any teacher, anywhere, of the greatness and value of the teacher's calling, and a new inspiration would come to all who were proud to name him friend and colleague, or friend and teacher.

J. V. DENNEY.



## COLLEGE OF COMMERCE AND JOURNALISM

*President W. O. THOMPSON, Ohio State University.*

DEAR SIR: I have the honor to present to the President and Board of Trustees the annual report from the College of Commerce and Journalism for the year ending June 30, 1920.

The registration the first semester was 251, the second semester was 318. The growth of the College will be seen by a comparison of the registration this year with the registration of the preceding year. The registration the first semester of the year 1918-19 was 62, and the second semester 103.

The registration of the College would be increased many fold with a four years' course which students could enter immediately upon the completion of their High School work. Many object to devoting two years' time to a liberal arts course before they can enter the work in which they are interested in Commerce and Journalism, and consequently prefer to go to the Wharton School of the University of Pennsylvania, or to the College of Business Administration of the University of Illinois where they can enter at once a four years' commerce course on the completion of their High School work.

The work of the Department of Economics and Sociology was greatly crippled through the loss of several members of the teaching staff who resigned to accept business positions and positions with other Universities where they were paid much better salaries than we could pay. Of the 19 members of the teaching staff of the department in 1918-19, 10 resigned before the beginning of the College year in September and two others resigned the first semester. Those who resigned received salaries in excess of those received here, ranging from \$500 to \$3,200. With a better salary schedule for 1920-21, we have every reason to believe that the teaching force of the department will be restored to its old-time basis.

The Department of Economics and Sociology continues to be seriously handicapped by its restricted and bad housing conditions. The offices of most of its teachers and nearly all the classrooms are in the basement of Page Hall, which is dark and badly ventilated and very badly suited for the housing of any department, much less a department as large and as important as the Department of Economics and Sociology. The making available three recitation rooms and some offices on the second floor of Page Hall would have offered some relief were it not for the fact that the registration in the courses in Economics and Sociology in 1919-20 was more than double the registration of 1918-19 and nearly double the registration of any preceding year. Consequently even with this additional space the department in 1919-20 found itself in more restricted quarters than ever before. Because classes in Economics and Sociology could not be taught in Page Hall or in buildings near Page Hall it was not an unusual thing for professors to have classes succeeding each other in remote parts of the campus and found it impossible to go from class to class in the interval allotted between classes.



Specialized and laboratory equipment is greatly needed for the teaching of Accounting, Statistics, Industrial Management, and Office Organization and Management, and until suitable rooms are available for the installing of proper equipment the work in these technical and specialized courses will be inferior. All the classes in Economic Geography should be taught in rooms near each other where charts and maps are available. We did not succeed the last year in having them taught even in the same building and consequently the use of proper appliances in the teaching of some of these classes was made impossible.

The departments of Journalism and of Economics and Sociology are situated as far apart on the campus as they could be placed. Their remoteness from each other makes it inconvenient for students and teachers in going from one building to another. The two departments should be housed in one building where suitable equipment and facilities should be provided.

Like most of the other departments of the University the enrollment in Journalism showed a large increase during the year. In all courses, counting duplication, there were 177 students. The number of individuals was 115, of whom 64 were men and 51 women.

Some of the important developments in the department within the year were as follows:

1. The establishment of the Monthly magazine, the Ohio Newspaper, with an edition of about 900 sent free to the newspapers of the state and to individuals who are interested in newspaper work. This publication has been well received and has proved to be helpful to the University and to newspaper men.
2. The resumption of publication of the University News, a weekly clip sheet which well serves the purpose of publicity. It is being liberally used by the newspapers of the state.
3. A convention in April for high school pupils of the state who were interested in school publications. About 125 boys and girls attended and profited by the instructive meetings that were held for two days. It is planned to make this an annual event.
4. Lectures and addresses by newspaper men and women to the classes at various times during the year.
5. Monthly departmental dinners at which addresses were made by newspaper men and women on shop subjects.
6. Through the medium of the Ohio Newspaper and correspondence, employment was found for all students who wanted regular positions or summer jobs. In fact the department has not always been able to fill all the requests that have been made for reporters.

It may be noted here that Ohio State was a pioneer in the plan of owning the daily paper and using it as the laboratory for the students. Now the University of Kansas and Indiana University are operating on a similar plan, and this spring DePauw University announced that it would take over the college paper.

With the large increase in enrollment in the department it has been found increasingly difficult to give as much laboratory practice as we should like, considering the size of the paper and the fact that it is published only five days a week. We shall soon have to come to a larger paper and a Saturday edition.



For two years we have not given the courses in agricultural writing, but this spring there was a pronounced demand from students of the College of Agriculture for such courses. If the money can be found for the employment of a man to give such courses we feel that such an arrangement should be made. These courses could be based on Journalism 101.

The printing department has been growing steadily in size and output. Originally installed to print the Lantern, it has grown to the point where the newspaper work is only a fraction of the output. The great bulk of the University printing is now done here, including stationery, forms, bulletins, brochures, magazines, agricultural extension, etc. It was decided last winter that the three volumes of the semi-centennial history should be printed by the University plant, and a good start on the work has been made. A new linotype was installed and is in operation.

The printing department has, of course, been affected by the increased cost of labor and supplies of all kinds. We have found it necessary to meet the wages of the commercial shops. Our prices are somewhat under the commercial prices but because of the small overhead we are able to make a small profit which goes into the upkeep and enlargement of the plant. It is by means of our rotary fund that we have been able to finance the printing of the history until such time as we shall be able to place the books on sale.

We are looking forward confidently to the time when we shall have a complete university press large enough to do not only the routine work of the University, but to publish books, magazines and pamphlets of educational and scientific worth.

In the spring of 1920 arrangements were made by the College of Commerce and Journalism with the American Association for Community Organization and the American Red Cross to give an eight weeks course for the training of organizers and executives of City Social work to be given jointly by representatives from the American Association for Community Organization and the Department of Sociology of the University. Arrangements were also made by the College with the American Red Cross to have courses given in the Summer School jointly by the Red Cross and the Department of Sociology for the training of executive secretaries and chapter managers of the Red Cross and Rural Community Organizers. These plans made Ohio State University the most important center in the United States in 1920 for the training of Social Workers.

#### BUREAUS OF RESEARCH

In the spring of 1919 the Board of Trustees approved the organization of a Bureau of Business Research and a Bureau of Social Research in the College of Commerce and Journalism. No provision has yet been made for financing these bureaus. A budget of \$25,000 was requested for these bureaus for the year 1920-21, and we regret to say that this request of the College was not granted.

The need for these bureaus and their importance to the College was presented to the Board of Trustees in the following report:

The functions of a technical or professional college are three-fold:

1. To increase knowledge by investigation and publication in the fields represented in the college;
2. To train a large student body in the principles and methods of subjects represented in the college;
3. To improve and to advance in every way the standards and methods of the profession or business represented by the College.



## BUREAU OF BUSINESS RESEARCH

*Its Functions:*

1. Collecting and classifying materials for courses of study to be found in government documents, in reports of business concerns, in annual and other statements of business concerns, on subjects of applied economics, such as money, banking, finance, taxation, investments, business organization, marketing, salesmanship, advertising, insurance, transportation, labor, etc.

No adequate literature exists at present in the newer lines of economics. Teachers of these subjects must draw heavily from present business practice and customs and they must know the points of view of the business man and have a knowledge of his organization and of his problems.

2. The Bureau of Business Research should conduct scientific investigations in business methods and make business surveys. This work should be done by members of the teaching staff and advanced students working under the direction of the Director of the Bureau of Business Research. In a later development of the Bureau there will be a need for the employment of special investigators.
3. The more important of these investigations should be published and provision should be made for funds to cover such expenditure.

*Equipment and Working Force:*

1. There is needed at present, shelf space for assembling and classifying material, technical magazines, etc. Space is also needed for filing cases where typewritten materials and reports are filed and where newspaper clippings carefully classified are also filed.
2. There is needed a Library Attendant with sufficient knowledge of the economic field to be able to select material and make workable classifications and indices of same.
3. There is needed also a Corresponding Secretary who is also a stenographer to secure material under advice of the Director of the Bureau and Library Attendant.

*Purposes:*

1. The collecting and classifying of materials and the investigations will serve distinct purposes in improving the teaching of subjects in applied economics.
2. Investigation in business methods and cooperation with business men will lead to the improvement of business methods and advancement of business science.

## BUREAU OF SOCIAL RESEARCH

The character of this bureau should differ somewhat from the Bureau of Business Research.

*Its Work:*

1. To collect, classify and tabulate material for the courses in Applied Sociology. This material will consist of annual reports, other reports and publications of public and private philanthropic, charitable and penal, and other social associations and agencies.
2. To make social investigations and social surveys by instructors and advanced students under the Director of the Bureau of Social Research.

In cooperation with the Ohio Institute of Efficiency, the Sociology group made a social survey of Portsmouth, Ohio, and was largely instrumental in determining the kind of social organization established there. The Sociology group also made a survey of the village of Belleville, Ohio, and recommended a social organization which was adopted. Request for social surveys of other



communities have been made of the Department of Economics and Sociology which have been declined on account of inadequate staff to do the work and of absence of funds to bear the expense. The Sociology Division of the Department of Economics and Sociology with the aid of its advanced students has made many social studies in and near Columbus. Through a Bureau of Social Research this work should be greatly extended.

*Equipment and Working Force:*

1. Precisely the same equipment and working force is needed for the Bureau of Social Research as for the Bureau of Business Research. The work can be conducted in the same room and by the same staff at the outset. The Library Attendant should be familiar with Sociology as well as materials in Economics.
2. There should be a separate Director of the Bureau of Social Research as the fields covered by the two bureaus are very distinct and an expert in both fields is not likely to be found. Moreover there is a distinct advantage in individualizing each Bureau especially for the benefit of agencies and organizations outside the University interested in each. The publications and reports of each Bureau should be kept distinct and under its appropriate heading.

*Purpose of the Bureau:*

1. The collecting and classifying of materials will improve the teaching in Applied Sociology (a) by making available the most recent information to teachers, (b) by making this information available to students in the advanced courses, and (c) by promoting graduate research.
2. The Social investigations and the cooperation of members of the Bureau with social workers and all those in the State engaged in uplift work will raise the plane of social work to a higher level.

## INSTITUTES

The business men of Ohio and others whose interests center in the College of Commerce and Journalism have a right to expect that the University will give the same attention to their problems as is being given by the College of Agriculture to the interests of the farmers of the State. One way of partially accomplishing this object is through the institute.

Business institutes should be promoted along two lines—the general business institute and the special business institute. The former is typified by the Farmers' Week. This should be held on the campus, should last perhaps a week and should have a general appeal to business men because of the considering on the program of a wide range of subjects.

The special business institute is typified by a salesmanship congress, on a conference on taxation in that one subject receives consideration and the appeal is to one class or group. The latter conference need not last longer than two or three days. The College of Commerce and Journalism should arrange for one or more of these conferences to be held each year on the University campus. The following would be appropriate subjects for such conferences or institutes: advertising, retail merchandising, taxation, municipal administration, labor problems, scientific management and newspaper organization. The Head of the Department of Journalism, commenting on this subject, has this to say of newspaper institutions: "Newspaper institutes have been found most advantageous in universities of the west. Newspaper men are invited to the University to participate in a two or three days' meet-

ing for which a program of speeches by well known men and round table discussion has been prepared. The institute could be planned in cooperation with the newspaper organizations already in existence."

It is perhaps unnecessary to say that these conferences would be very valuable to those who would participate in them, to the students in these subjects and the University would perform a distinct public service.

#### COMMUNITY INSTITUTES

The University should also establish community institutes from time to time in different centers of the State. We have already been invited to make social surveys for the purpose of having us recommend reorganization of philanthropic activities. Conferences of two or three days length with public spirited citizens and social workers dealing with problems of community welfare should be arranged in some of the leading centers of the State.

Business Institutes of a general character should also be held in some of the larger centers of the State. A business institute might be promoted in cooperation with the Chamber of Commerce in any of the larger cities of the State. At such conference lectures should be given and conferences held on such topics as local resources, shipping facilities, retailing, advertising, municipal government, the work of the newspaper, etc. Such a conference would be much more valuable if it followed a survey of the business resources of the city by the Bureau of Business Research. Several institutes of this kind should be given each year and a real public service would be rendered by them.

Respectfully submitted,

J. E. HAGERTY.



## COLLEGE OF DENTISTRY

*President W. O. THOMPSON, Ohio State University.*

DEAR SIR: I have the honor to present to the President and Board of Trustees the annual report from the College of Dentistry for the year ending June 30, 1920.

The College of Dentistry has just closed its sixth year in the Ohio State University and it affords me pleasure to report that the year has been one of progress, having settled down after two or three years of disturbance during the war, to steady work.

The year just passed has given us a good opportunity to test out the dental curriculum of four years. This curriculum was built by the various college organizations and other dental organizations interested in the educational side of the profession, presenting a very heavily scheduled course throughout the four years. A schedule totaling over five thousand actual working hours in class room, clinics, and laboratories, naturally is one of large dimensions. The attempt to make a so-called split course by bringing in such ancillary subjects as Biology, English, Technical Drawing, etc., has had much to do with the overloading in the entire four years. Under the pressure of laws already established in a number of the states, as well as the desire on the part of dental colleges connected with universities, a five-year course has been arranged, of which the first year shall be a pre-dental year. This pre-dental year may be obtained, by a prospective student, in any accredited College of Arts or Science.

Five dental colleges have already established the five-year course. This college, with a few other colleges of the country, is committed to this pre-dental year commencing with September, 1921.

The new schedule as proposed for these five years, I now present as follows:

PRE-DENTAL YEAR	First Semester	Second Semester	Total
Biology .....	64	96	160
Chemistry.....	128	128	256
English .....	48	48	96
Elective (subjects to make up 30 credit hours for the year)			
FRESHMAN YEAR			
Anatomy-Gross .....	160	160	320
Anatomy-Oral .....	0	112	112
Chemistry-Organic .....	144	0	144
Drawing.....	64	0	64
Prosthesis .....	160	208	368
			<hr/> 1008

## ANNUAL REPORT

SOPHOMORE YEAR	First Semester	Second Semester	Total
Anatomy-Histology and Embryology.....	80	80	160
Anatomy-Oral .....	48	0	48
Bacteriology .....	0	128	128
Chemistry-Physiological .....	0	64	64
Crown and Bridge Technic .....	48	48	96
Metallurgy .....	48	0	48
Operative Dentistry Technic .....	64	64	128
Physiology .....	80	80	160
Prosthesis .....	112	64	176
			<hr/> 1008

JUNIOR YEAR			
Clinical Practice .....	368	368	736
Crown and Bridge Technic .....	64	64	128
Dental Medicine .....	16	16	32
Operative Dentistry Principles .....	32	32	64
Oral Hygiene .....	16	0	16
Orthodontia Technic .....	0	64	64
Pathology .....	128	0	128
Pathology-Special-Oral .....	0	128	128
Porcelain Technic.....	48	0	48
Prosthesis Principles .....	16	16	32
			<hr/> 1376

SENIOR YEAR			
Anesthetic Principles .....	16	16	32
Clinical Practice .....	608	608	1216
Dental Medicine Principles .....	16	16	32
History, Ethics, Jurisprudence .....	16	16	32
Operative, Principles and Ex. ....	16	16	32
Oral Surgery Principles .....	16	16	32
Orthodontia Principles .....	16	16	32
			<hr/> 1408

This course is yet somewhat tentative, but at a meeting in Boston during the last week in August, 1920, it will be either accepted or re-arranged to suit the general needs of the various colleges concerned.

Early in the fall, therefore, our Executive Committee will present to the proper university faculty committee our re-arranged scheme of the new dental college course.

It is interesting, also, to note that we are fast approaching the time when an applicant for entrance into the College of Dentistry will be required to present for entrance credentials two years of pre-dental work obtained in a College of Arts or Science. Three states have already passed such laws, New York, North Carolina, and North Dakota. A number of other states, through their Examining Boards, have notified me that, not later than 1925, they will also have a requirement of two years of pre-dental college work. It is well, therefore, for us to have in mind that by 1925-26, it will be necessary for us to change from a five to a six-year course.



With the rest of the University, we had the largest freshman class that was ever entered into the College of Dentistry and I have no reason but to believe that the dental freshmen next year will also be in large numbers. Anticipating our change to the five-year requirement in 1921, I have already had a number of applicants request that I give them a course of study so they could obtain one pre-dental year credit during the session of 1920-21 in an accredited College of Arts and Science. These prospective students are voluntarily placing themselves on the five-year basis one year before required. This shows that, while no doubt we will not have a large class in the fall of 1921, we will at least have a good number to constitute the first class of the five-year course.

The personnel of our student body during the past year is as follows:

First Semester—

Freshmen .....	98	Juniors .....	19
Sophomores .....	20	Seniors .....	30

Second Semester—

Freshmen .....	90	Juniors .....	19
Sophomores .....	20	Seniors .....	29

There were 10 students placed on probation for the first semester, with 16 for the second semester. Approximately twenty-five dental students are enrolled in the summer school course.

The popularity of our clinic or infirmary is easy to see when we recognize the difference between the total receipts for the year 1918-19 (\$5,439) and the total for the year 1919-20 (\$8,890). The fact is that we were utterly unable to take care of the patients that applied, having on our reserve list about two hundred and fifty that we have requested to come in during the summer session or to obtain work elsewhere.

The statistics for the year in the clinic are as follows:

Gold Fillings .....	902	Plate Repairs .....	51
Gold Inlays .....	559	Pyorrhea—treat .....	704
Amalgam Fillings .....	1231	X-Ray .....	221
Cement Fillings .....	179	Orthodontia .....	10
Enamel Fillings .....	305	Anesthetic—general .....	48
Gold Crowns .....	137	Anesthetic—local .....	569
Gold Crown Repairs .....	38	Extraction under	
Gold and Porcelain Crowns .....	42	General Anesthetic .....	528
Porcelain Crowns .....	94	Extraction under	
Bridges .....	102	Local Anesthetic .....	1,880
Bridges Repaired .....	38	Total Extract .....	2,408
Plates (vulcanite) .....	304	Fractured Jaws .....	3
Plates—gold .....	1	Cleft Palate .....	1
Plates—aluminum .....	2	Prophylaxis .....	1,421
Plates—alloy .....	1		

As usual, the dental members of our faculty have been quite active during the past year and I present their various activities outside of their college and office work:

Paper and Clinic on "Prosthesis" at the North Central Ohio Dental Society in October, 1919; Paper and Clinic on "Special Anchorage Lower Plates" Southern Ohio Dental Society in May, 1920; Paper and Clinic on "Prosthesis" Hocking Valley Dental Society in May, 1920. .... Professor H. V. Cottrell

Paper and Clinic on "Amalgam Restorations" at the following societies: Mad River Valley Dental Society in March, 1920; Hocking Valley Dental Society in April, 1920; Rehwinkel (Washington C. H.) Dental Society, June, 1920; Columbus Dental Society, June 29, 1920; Attended American Institute of Dental Teachers at Detroit, Michigan, January, 1920, .... Asst. Professor C. H. Hebble

Address before Muskingum Valley Dental Society, October, 1919; Attended American Institute of Dental Teachers at Detroit, January, 1920. .... Asst. Professor Wm. C. Graham

Clinic on "Inlayed Bridges" at the following Societies: Hocking Valley Dental Society, March, 1920; Southern Ohio Dental Society, May 17, 1920; Rehwinkel (Washington C. H.) Dental Society, June 9, 1921; Columbus Dental Society, October, 1919; Attended American Institute Dental Teachers at Detroit, January, 1920. .... Instructor H. S. Shumway

President Columbus Dental Society 1919-20; Address and Clinic on "Exodontia" at the Central Ohio Dental Society, September, 1919; Clinic on "Exodontia" at the following societies, Rehwinkel (Washington C. H.) Dental Society, February, 1920; Hocking Valley Dental Society, December, 1919; Article on "Exolevers" published in the April number of the Dental Summary; On clinic committee Ohio State Dental Society; Attended the National Dental Society at New Orleans in October, 1919. .... Instructor D. P. Snyder

Paper and Clinic at Ohio Valley Dental Society, October, 1919; Clinic at the Ohio State Dental Society December, 1919; Clinic at the Rehwinkel (Chillicothe) Dental Society in February, 1920; Paper at the West Virginia Dental Society in April, 1920; Attended the American Institute of Dental Teachers in Detroit, January, 1920; Member of the Ohio State Dental Society, Education and Oral Hygiene Committee, and attended their sessions during the winter at Akron, Cleveland and Columbus. .... Instructor E. W. Martindale

Paper on "Focal Infection" at the following Societies: Columbus Dental Society, March, 1920; Hocking Valley Dental Society, May, 1920; Attended the American Institute of Dental Teachers at Detroit in January, 1920. .... Instructor I. A. Bottenhorn

Clinic at Rehwinkel (Chillicothe) Dental Society in February, 1920; Attended the American Institute of Dental Teachers at Detroit in January, 1920. .... Instructor O. O. Mobberly

Clinics on "Orthodontia" at the following Societies: Ohio State Dental Society, December, 1919; Hocking Valley Dental Society, February, 1920; Rehwinkel (Chillicothe) Dental Society February, 1920; Attended the meeting held in Chicago, January, 1920; of the American Society of Orthodontists. .... Instructor Earl G. Jones

Attended the meeting of the American Institute of Dental Teachers in Detroit, January, 1920. .... Instructor Frank C. Starr



President-elect of the Ohio State Dental Society 1919-1920. Addresses at the following Societies: Rehwinkle (Hillsboro) Dental Society, Sept. 1919; Central Ohio Dental Society, October, 1919; Eastern Ohio Dental Society, April, 1920; Muskingum Valley Dental Society, May, 1920; Hocking Valley Dental Society, May, 1920; Southern Ohio Dental Society, May, 1920; Attended the National Dental Society at New Orleans in October, 1919; Attended the American Institute of Dental Teachers at Detroit in January, 1920 ..... Dean Harry M. Semans

The forty-six dental colleges throughout the United States are still grouped into two separate associations. In the past you have been made familiar with the attempts by the dental profession at large and others interested, to bring together these two associations, but the high ideals being striven for in those dental colleges which are integral parts of large universities, seem to be, for the present, unsurmountable in a combination of these two associations.

The association to which we belong is slowly growing from a membership of seven to the following:

Harvard University  
Tufts  
University of Pennsylvania  
Ohio State University  
University of Michigan  
University of Illinois  
University of Minnesota  
University of Iowa  
Washington University  
University of Nebraska  
University of California

The following members of the senior class were elected into the honor dental fraternity, Omricon Kappa Upsilon:

Howard Lee Warner  
Radford Palmblad Potter  
Frederick Thomas Baumgartner

The change sanctioned last fall on the northwest wing of the Park Street building, used for dental purposes, has been consummated with the new College of Dentistry office, commodious and of proper dignity; also an examination room, an infirmary or clinic with ten operating chairs, and a laboratory for senior practical work.

As usual, our students have been in continual demand during the past year at the neighboring state institutions as well as county and city institutions, for dental service. We have found it necessary to restrict this outside work, but have taken care of the Girls' Industrial Home and the Franklin County Orphanage as we have been doing in the past few years.

One year ago, under the sanction and auspices of the Philanthropic Council, twelve thousand dollars was raised to equip five dental units in this city. These five dental units are located as follows:

Godman Guild  
West Side Settlement House  
South Side Settlement House  
Schonthal Home  
Children's Hospital

Two of our graduates, Drs. Klar and Castor, of the Class of 1919, were appointed at a salary of eighteen hundred dollars a year to look after the five clinics, divided throughout in as equitable manner as possible.

I have served during the past year as Secretary of the Board of Directors, and Dr. W. C. Graham, of our faculty, has served as Supervisor of the five units in a splendid way.

More than two thousand indigent poor children under the age of sixteen have been taken care of. Cases that are found in this Columbus Children's Dental Clinic that require special care are sent to the dental college clinic. Through our official positions and our cooperation of work the five city dental units are becoming a valuable asset from the practical side of our work.

Respectfully submitted,

H. M. SEMANS,  
*Dean.*



## COLLEGE OF EDUCATION

*President W. O. THOMPSON, Ohio State University.*

DEAR SIR: I have the honor to present to the President and Board of Trustees the annual report from the College of Education for the year ending June 30, 1920.

## ENROLLMENTS

The College enrolled 546 students as compared with 526 during the previous year. These figures include those enrolled in the Arts-Education combination curriculum, but do not include 279 registered in the summer session of 1919. During the year 115 students were graduated from the University through this College. This is the largest number graduated in any year since the College was established. These figures of enrollment are the largest in the history of the college with the exception of 1916-17, the last pre-war year of student life. Because the proportion of women is larger in this College than in the other colleges of the University, it suffered less diminution in enrollment during the war years, and in consequence did not show as large a percentage of gain as the others during the past year. A more potent cause, however, of the relatively smaller increase has been the low salaries paid to teachers throughout the country, and the many new openings for women in industrial and commercial positions commanding far higher salaries than in the teaching profession. The general increase in teachers' compensation throughout Ohio for the coming years should bring among its effects a marked increase in the enrollment in this and other colleges of education next year. The plans for the future of the College should keep this in view.

## THE WORK OF THE YEAR

The work of the year in the several departments of the College has been carried on with an energy and success fully equal to that of the pre-war years, notwithstanding the inadequate salaries of the instructional force as measured by present economic conditions. In this respect the College of Education has been extremely fortunate. It has suffered less than the University as a whole from the general spirit of unrest that has affected the entire country and that in University life has weakened the morale of faculties and students to a regrettable extent. Too much recognition cannot be given to the members of the instructional force of this College as a body for the unflagging service they have given to our students under conditions by no means normal. In addition to this the department of psychology was flooded with such an increased enrollment as to require the addition of an emergency instructor and an increased teaching schedule for the regular staff. Even then the number of students necessarily assigned to the several sections of the general course was much larger than it should have been. The department of Art was, and is, seriously handicapped by lack of adequate room for lecture and

studio courses. Provision must be made at the earliest possible day for more room for this department if it is to serve the students with the same efficiency as in the past when the enrollment was far smaller.

Few changes have been made in the curricula of the College. The most notable is the withdrawal of the special curriculum in Agricultural Education established in 1912. This is now withdrawn. Preparation of teachers in agriculture for the Smith-Hughes schools has been arranged in the College of Agriculture, pursuant to the law passed by Congress since that time. It seemed wise to avoid duplication at this point. Students preparing to teach agriculture in the higher schools and in college can now enter the regular four-year course in the College of Education and major in Agriculture and its cognate subjects, thus obtaining an even better professional equipment than in the special curriculum that has been withdrawn.

As the college grew and developed it became evident two or three years ago to some of its faculty, as well as to the administrative office, that while the large majority of the students were seeking to fit themselves as teachers in the secondary schools, an increasing number were seeking to qualify themselves for administrative and supervisory positions. The training for the two types of positions in secondary education should therefore be somewhat different. The war necessarily postponed the consideration of any fundamental changes in college curricula. In December of the past year, however, the faculty of the College, at the suggestion of the Dean, authorized the appointment of a special committee to study the general subject of professional requirements in our curricula, and to report its findings and recommendations at the first meeting of the faculty in the coming autumn. That committee has been at work for some months and will have its report ready for the information of my successor as Dean and for consideration by the faculty in the early fall.

The supervised practice teaching of our seniors has been carried on as usual in the high schools and intermediate (Junior High) schools of Columbus. Not only have a larger number of students than ever before been given the opportunity for such training but the supervision, both by our supervisors and by the regular teachers, has been more systematic. It is unfortunate, however, that this year, as in the past two, because of resignations, or leaves of absence, temporary substitutes have had to be called into service. The continuity and efficiency of the supervision cannot be maintained where the supervisory staff is shifted from year to year, especially where this is done on very short notice.

The principals and teachers of the Columbus schools have been cordial and helpful in affording every possible facility for our student teachers.

#### PUBLICATIONS AND RESEARCH

While the year has been marked by overcrowded classes and consequent over-time service by the instructors, in the majority of the departments a goodly amount of special research has been under way and a notable number of articles by members of the faculty have been published, and papers pre-



sented at meetings of learned societies setting forth results of these studies. Especially have the members of the department of psychology been active. The report of that department for the year shows sixteen papers published by members and nearly thirty more studies, either now in press or in progress. In some other departments the results of research are nearing completion for publication. If the college is to maintain a prominent position in the advancement of education and to be helpful in the solution of the new problems in education in America as well as in the training of future teachers, it is evident that the members of its faculty must be contributors and not content merely to be beneficiaries of the researches and publications of others.

During the year approximately one hundred addresses, either before the general public or before clubs and associations, have been made by members of the faculty. The attendance of members of the instructional force at meetings of learned associations and bodies of educators and investigators has been far more marked than in any previous year. While several have appeared upon the program of these meetings with valuable papers, it should not be forgotten that, while important, mere attendance year after year at these gatherings without an occasional contribution to the program rightly classes us as inactive in our respective fields.

This report would be incomplete if it did not call attention to the important work done during the past year by the department of psychology in "the mental measurements of native ability" of the students of the entire University. The value of these measurements and "their application in matters of administration and classification of students" is just coming into full appreciation. The labors of the department in this work with our own students and in various schools of the state, have attracted wide notice. The department, and in a secondary way the College of Education and the University, has already won a position of leadership in this important educational movement.

#### THE NEEDS OF THE COLLEGE

In view of the fact that this is the final report of the present Dean it would be unfitting for me to do more than indicate briefly what appear to be leading needs in the immediate future in order that the College may more adequately serve the purpose for which it was established.

##### *First: Within the College:*

1. The establishment of a department of secondary education. This would deal with a field not covered by any existing department in the College. It would also relieve the department of School Administration, and in lesser degree the department of Principles of Education, from dealing with subjects and aspects of education not properly within those fields and would enable them to handle more intensively their appropriate subjects.
2. Additional instructional force in psychology, especially in the field of Educational Psychology.
3. An additional Professor in School Administration. The reorganization of the public school education and system which the lessons of the last four years have brought home to America makes this department and that of secondary

education, mentioned above of far greater importance than ever before—a change that is already recognized and provided for in the leading schools of education both undergraduate and graduate.

4. Increased instructional force, equipment and laboratory or studio room for the Department of Art.
5. A considerable addition to the equipment of the Department of Psychology, including the replacement of apparatus that has been worn out by long and constant use.
6. A larger staff of supervisors of practice teaching. It is impossible, with the present force, to keep in daily touch with from sixty to eighty student teachers scattered among the various high and intermediate schools of the city.

*Second: In Connection With the College:*

1. The establishment under the jurisdiction of the College of an educational research bureau as prescribed by statute at least six years ago, but for which as yet no appropriation has been made. Such bureaus have been established in the schools of education of several of our neighboring states, and have already proved of high value to the schools of those states.
2. Provision for an annual Superintendents' and Principals' Week at the University, a rally and round table week for the consideration of the problems of education in the field. This would bring together, if rightly planned and conducted, school men from all over the State and would be of mutual advantage to both school men and the University.
3. Provision for, and more incentive toward, field visitation by the faculty of the College to the Schools, Teachers' Institutes and association meetings in the various parts of the State. Members of the instructional force of the College should be expected, and if necessary required as a branch of their duty, to make themselves better acquainted with the teachers and the schools of the State. For this purpose provision might properly be made in the annual budget of the College.

In concluding this report it is a pleasure to mention the constant and hearty spirit of harmony and cooperation that has existed in the faculty in this trying year of readjustment after the war conditions of the preceding two years.

Respectfully submitted,

G. W. KNIGHT,  
*Dean.*



## COLLEGE OF ENGINEERING

*President W. O. THOMPSON, Ohio State University.*

DEAR SIR: I have the honor to present to the President and Board of Trustees the annual report from the College of Engineering for the year ending June 30, 1920.

## ENROLLMENT

	First Semester	Second Semester
Architecture .....	57	61
Architectural Engineering .....	43	44
Ceramic Engineering .....	51	42
Chemical Engineering .....	252	223
Civil Engineering .....	214	198
Electrical Engineering .....	346	303
Mechanical Engineering .....	315	287
Mine Engineering .....	66	53
General Engineering .....	30	39
Unclassified .....	54	36
Total .....	1,423	1,286

A large enrollment for the first semester was realized as was forecast in my report of June 30th, 1919. The shrinkage for the second semester checks closely with that for 1916-17, a normal year, when the registration for the first semester was 951 and the second semester 879, making a shrinkage of 92%, as compared to a shrinkage of 90% for the past year.

Comparing the total enrollments for this year and the three previous years, namely 1917-'18-'19 it is noted that there was an increase of 2% from 1916 to 1917, a decrease of 11% from 1917 to 1918, an increase of 39% from 1918 to 1919 and an increase of 20% from 1919 to 1920. Eliminating the abnormal years and comparing the total increase from 1916 to the present year, there is an average increase per year of about 13%, an increase which will be maintained, if not exceeded.

## GRADUATES

The number of students receiving their degrees at Commencements or during the year is as follows:

Bachelor of Architecture .....	11
Bachelor of Architectural Engineering .....	3
Bachelor of Ceramic Engineering .....	10
Bachelor of Civil Engineering .....	37
Bachelor of Chemical Engineering .....	25
Bachelor of Electrical Engineering .....	18
Bachelor of Mechanical Engineering .....	23
Bachelor of Engineering in Mining .....	6
Bachelor of Engineering .....	17
Civil Engineer .....	3
Total .....	153

This number of graduates is not to be compared with those of the abnormal years of 1918-'19 or even 1917. From 1916 to 1917 there was an increase of 6%, from 1917 to 1918 there was a decrease of 32%, from 1918 to 1919 there was a further decrease of 21%, but from 1919 to 1920 there was an increase of 142%. Eliminating the abnormal years and comparing the total increase in graduates from 1916 to the present year there is found an average increase per year of about 9% which may be compared with the average increase of 13% per year in the engineering student body over the same period of time.

#### FACULTY

Of the twelve members of the Engineering Faculty who served in different capacities in the United States Army or in Government work as Civilians, nine returned to assume their regular University duties, while three resigned in order either to continue in Government Service or to enter the commercial field.

Those of professorial rank who resigned were Frank E. Sanborn, Professor of Industrial Arts, and Alan E. Flowers, Professor of Electrical Engineering. Professor Wm. A. Knight, Associate Professor of Machine Shop Practice, was promoted to Professor of Mechanical Practice in charge of the department of Industrial Arts.

With the exception of one instructor, absent on leave, the whole Engineering teaching staff was on duty during the year and carried along faithfully and very industriously their several lines of work, arduous though this was, due to the large student increase.

#### THE ENGINEERING EXPERIMENT STATION

The personnel of the Advisory Council for the year ending June 30th, 1920, was:

E. F. Coddington .....	Acting Director
F. C. Caldwell .....	3 years
A. D. Cole.....	3 years
C. E. Sherman .....	2 years
J. R. Withrow .....	2 years
W. T. Magruder.....	1 year
D. J. Demorest .....	1 year

The appropriation passed by the Legislature for the biennium ending June 30th, 1921, included \$20,000 for the Engineering Experiment Station.

Out of the \$10,000 available for the year ending June 30th, 1920, the Advisory Council recommended the following allotments which have been approved by the Board of Trustees:

#### PROJECT No. 1

Hydrology of the Upper Scioto—Prof. Sherman ..... \$2,000.00

#### PROJECT No. 2

Analysing and Testing the Coals of Ohio—Prof. Demorest ..... \$3,000.00

#### PROJECT No. 3

Exhibit at the convention of the Ohio Independent Telephone Association—Prof. Wright..... \$125.00



PROJECT No. 4	
Study of Kerosene Burners for Motor Cars—Prof. Magruder .....	\$800.00
PROJECT No. 5	
Study of Bearing Testing Machine—Prof. Magruder .....	\$300.00
PROJECT No. 6	
Study of Flow of Water—Prof. Judd .....	\$400.00
PROJECT No. 7	
Study of the Properties of Combustible Mixtures through Carburetors, Manifolds—Prof. Norman .....	\$500.00
PROJECT No. 8	
Study of "The Electrical and Magnetic Properties of Alloys"—Prof. Smith .....	\$300.00
PROJECT No. 9	
Study of Wireless Telegraphy—Profs. Blake and Brown .....	\$60.00
PROJECT No. 10	
Study of Sulphur Dioxide determination in fumes from smelters, etc.— Prof. Withrow .....	\$400.00
PROJECT No. 11	
Studies on Solid Electrolytic Amalgam and Endosmosis—Prof. With- row .....	\$400.00
PROJECT No. 12	
Properties of Natural Gases—Prof. Earhart .....	\$150.00
PROJECT No. 13	
Exhibit at the convention of the Ohio Telephone Association—Prof. Wright .....	\$75.00
Total .....	\$8,435.00

The investigations connected with a majority of these projects are nearing completion and it is the hope of the Advisory Council to have several of them printed as Experiment Station Bulletins by the end of the present biennium.

The carrying forward of these projects has been hindered, somewhat, by the overload of teaching duties carried by those who were in charge of the respective investigations.

#### THE CERAMIC EXPERIMENT STATION

The Ceramic Experiment Station of the United States Bureau of Mines is housed in an extension to Lord Hall which was constructed by the Board of Trustees for that purpose.

The relations existing between the personnel of the staff of this Station and that of the Ceramic Department of the University have been most cordial. Some of the equipment of the department has been used extensively by the Station. On the other hand, some of the senior Ceramic students have been permitted to use the Station equipment to carry on thesis work. The College of Engineering is fortunate in having this Ceramic Experiment Station located on the campus.

#### NEW EQUIPMENT

Very little new equipment has been added to the several departments of the college during the past year with possibly the exception of the department of Industrial Arts, for which there was provided forty-five hundred dollars, although thirty thousand dollars was needed to completely equip the

shops of this department. As bearing upon this subject of equipment, it is significant that for the year 1920-21 the sum total of requests for equipment for the Engineering College urgently needed for all departments was nearly three times the amount it was possible to appropriate for the purpose.

Respectfully submitted,

E. F. CODDINGTON,  
*Acting Dean.*



## COLLEGE OF HOMOEOPATHIC MEDICINE

*President W. O. THOMPSON, Ohio State University.*

DEAR SIR: I have the honor to present to the President and Board of Trustees the annual report from the College of Homoeopathic Medicine for the year ending June 30th, 1920.

The past year has marked the beginning of the period of development of the college since the late war. The college was established after war was declared and whatever progress was made was necessarily accomplished during the world upheaval.

Throughout the year just closed, all of the regular members of the faculty have been on duty, Doctors Grosvenor and Sage having returned from military service. Dr. Keiser, who before his war service had been assistant in the Department of Surgery, likewise returned and went immediately to Harvard University Medical School to do special work in orthopedic surgery. Dr. Faulder, who had been clinical assistant in Gynecology and Obstetrics, resigned to go into practice with his brother in Wapakoneta. At the beginning of the second semester, Dr. Edgar B. Junkerman was made lecturer in dermatology; Dr. Junkerman had served in the medical corps during the war and afterwards had taken up special work in diseases of the skin. Dr. E. H. Baxter, who, during the war, had been in charge of a part of Dr. Grosvenor's work, returned to the college at the beginning of the school year as instructor in pediatrics after having spent six months as chief resident interne at the Children's Homoeopathic Hospital in Philadelphia.

Since this year was the fourth following the increasing of preliminary entrance requirements to two years of college work and since this was also the war class, we had but one senior. The freshman class also suffered to some extent because of the fact that a number of men doing premedical work had been compelled to leave college for military service and, on returning, found that they had not had sufficient preparation to enter upon the study of medicine without further arts study. As a result of these conditions we find ourselves with a much larger freshman class for the coming year, probably about twenty.

The University Hospital has continued to grow. The total number of patients increased from 3,395 in the year 1918-1919 to over four thousand in 1919-1920. The number of resident patients in the hospital increased to such an extent that for the last six months we have had a waiting list continually.

Through the better organization of the sub-department of pediatrics, the important work of caring for children has made splendid development.

The income from the hospital has likewise increased to a very great degree, as is shown by the accompanying report. The business of the hospital for the past year was over forty-six thousand dollars as compared with twenty-five thousand dollars the previous year, the cash receipts of more than thirty

thousand dollars being a marked increase over those of 1918-1919. Had more bed-space been provided, the hospital would have made a still better showing.

At the beginning of the second semester, through the generosity of Mr. Kettering, sixty milligrams of radium were purchased for hospital use. While it is too early to report on the final importance of this gift, it is proper to say that remarkable results have already been obtained in the treatment of cancer with this most valuable element. One patient recently treated for cancer of the face was so gratified that a check for one hundred dollars was donated to the hospital.

With greatly restricted accommodations, the Department of Homoeopathic Materia Medica has continued to carry on important experimentation. Dr. Hinsdale has published, during the year, a number of reports in various national publications.

Too much cannot be said of the importance of Mr. Charles F. Kettering's gift for homoeopathic medical research. This gift will make possible the carrying on of a most important work for years to come. Its announcement has already been the incentive to one or two other important contributions to the college. We believe that it will be still further influential in attracting endowment in large amounts to other colleges and departments of the University. We are ambitious that the College of Homoeopathic Medicine and the University Homoeopathic Hospital shall do such work as to attract sufficiently adequate sums to make this branch of medicine an important factor in the health of the people of the State of Ohio. We believe that the State University, peculiarly in Ohio, where it is located in the geographical center of the state and in a comparatively large city, should likewise be the medical center of the state. In addition to the maximum appropriation that can be expected from the state legislature, we see no reason why the alumni and friends of Ohio State University should not make the University the repository for large sums of money, to be spent in the interests of the education of our young men and women.

With the money available through the Kettering gift, we propose that at least two buildings be erected; a science hall for the College of Homoeopathic Medicine and the University Homoeopathic Hospital, which shall be the clinical laboratory for the work of the college and which shall have an equipment for every possible means of examination and diagnosis of the patient. This building would also be provided with sufficient hospital bed-space to care for exceptionally difficult medical and surgical cases demanding special study and attention by members of the staff. In addition, we recommend the erection of a smaller laboratory, to be known as the laboratory for medical experimentation. This building should be equipped with every convenience for experimentation on animals, in order that a better understanding may be had of the entire field of medicine and surgery.

For immediate relief and to care for the hospital expansion until building conditions will permit the carrying out of the above plans, we recommend



that the barracks hospital be moved to that part of the campus near the University hospital and used for hospital purposes.

We wish to recommend further that provision be made for the better housing of nurses in training at University Hospital. The securing of young women for nursing is one of the serious problems of the present time. Scores of hospitals over the country have been forced to close their doors or to discontinue their training schools because of lack of pupil nurses. The University Hospital should attract nurses to its training school provided we have adequate housing facilities for those who may come.

I am furnishing you the usual detailed report of University Hospital by departments, all of which is respectfully submitted.

Respectfully submitted,

CLAUDE A. BURRETT,  
*Dean.*

## UNIVERSITY HOMOEOPATHIC HOSPITAL

Report of year from July 1, 1919, to July 1, 1920.

Total number of patients treated .....	4,131
Total number of In-Patients .....	1,492
Total number of Out-Patients .....	2,639
Number of counties from which In-Patients came .....	72
Number of counties from which Out-Patients came .....	85
Number of states from which In-Patients came .....	11
Number of states from which Out-Patients came .....	15
Number of countries from which In-Patients came .....	9
Number of countries from which Out-Patients came .....	12
Number of student In-Patients .....	150
Number of student Out-Patients .....	1,205
Number of hospital bed-days for the hospital year .....	19,532
Total business for the hospital year .....	\$46,352.60
Total cash receipts .....	\$30,140.91

• In comparison with the hospital report of the previous year, it is noticeable that there is a gain in total business for the hospital year just past of \$20,982.35 over that of the year 1918-1919. In the amount of total cash receipts, the gain over the amount of the previous year is \$7,305.65. The difference of \$16,211.69 between total business for the hospital year and the total cash receipts includes not only charity accounts, but also many bills which are collectable.



## COLLEGE OF MEDICINE

*President W. O. THOMPSON, Ohio State University.*

DEAR SIR: I have the honor to present to the President and Board of Trustees the annual report from the College of Medicine for the year ending June 30th, 1920.

## ENROLLMENT

The College enrolled 185 students, of whom 35 were special or were taking graduate work in various departments of the College. Of the total number of medical students proper, there were 141 men and 9 women. A considerable number of the students enrolled have seen service in the United States Army and Navy; some enrolling for the first time, others returning to complete their medical work. A special post-graduate course was given during the fall to a large number of physicians acting as health officers in various parts of the state.

## FACULTY

The Faculty of the College of Medicine had 26 men serving in the Army, Navy and Public Health Service. Some few of the Faculty returned at the close of the academic year of 1918-19. The beginning of the academic year of 1919-20 found most of the Faculty returned to their respective duties in the Medical College with the exception of two or three men who remained permanently in government service. The complete history of the activities of the Faculty of the College of Medicine in the World War is to be found in the Centennial History being prepared by the University and is not repeated here. Great commendation is due those members of the Faculty who remained at home and willingly undertook the extra burdens of teaching while other members were in active service. At the request of the Surgeon General of the Army, the Faculty was reduced to absolutely working minimum of essential teachers in order to allow release of as many men as possible for war service. A great many members of the Faculty who saw active service have brought back to the College of Medicine many rich experiences which are of great value in medical teaching. To many who served in the Army, the experiences gained are regarded as an intensive period of post-graduate training. The Faculty of the College of Medicine has made its contribution to the success of the military establishment and at the same time has been materially benefited so that in the future a better grade of medical teaching may be accomplished. During the year few changes in the Faculty personnel have occurred. A large number of the Faculty have published scientific papers and addressed various scientific and medical societies in the state on various medical topics.

## CLINICAL TEACHING

The clinical and dispensary work carried on by the College during the year has been most satisfactory. Approximately 6,000 patients have been

treated in the Dispensary on State Street and approximately 1,800 patients have been cared for in the medical, surgical and obstetrical clinics in St. Francis Hospital, Protestant Hospital, Children's Hospital and in the various maternity homes under the supervision of the College.

During the year some changes have been made in the methods of medical teaching. The major portion of the didactic work in clinical medicine, surgery, obstetrics, and the specialties has been given during the sophomore and junior years, the senior year being devoted largely to clinical teaching. This method has been continued, but in the senior year joint conferences on medical and surgical cases have been held daily. In this way all the students in the various sections have the opportunity of seeing and going over practically all the valuable cases. In addition, two medical conferences and two surgical conferences for junior and senior students have been held during the week. As a result all the material has been utilized to its full limit.

Attention is directed to the records which have been made by the students of the College of Medicine before the various State Boards of the country during the last few years or since the University took over the College of Medicine in 1914. No student has failed to pass the licensing examination in any state. In Ohio, the records show that without exception all students have passed the examination of the Ohio State Medical Board and the majority have qualified in the upper third of the class examined.

Very truly yours,

E. F. McCAMPBELL,  
*Dean, College of Medicine.*



## COLLEGE OF PHARMACY

*President W. O. THOMPSON, Ohio State University.*

DEAR SIR: I have the honor to present to the President and Board of Trustees the annual report from the College of Pharmacy for the year ending June 30th, 1920.

## ENROLLMENT

The enrollment of the college the past year was 116, the largest in the history of the school. Of those enrolled 97 were men and 19 women. The increasing number of women enrolled is quite gratifying in that it indicates more and more that the study of pharmacy opens not only a pleasant, but quite a remunerative field to them. Another important consideration to be noted relative to the enrollment is the fact that it has increased in the face of increased entrance requirements.

## PROGRESS

We feel that the past year has marked not only an era of increased enrollment, but also a greater desire on the part of those taking up the study of pharmacy to obtain, not the minimum, but rather as thorough training as possible. This we feel is well evidenced by the increased number of students enrolled in the four-year course. In this connection it should be stated that the demand for men with a training similar to that offered in our four-year course, is constantly increasing and at the present time we find it impossible to supply the demand for men with such a training. It is also a matter of considerable pride that we find our graduates rapidly advancing in the commercial and technical fields, demonstrating thereby not only the value, but also the thoroughness of their training.

Another feature which we feel speaks well for the thoroughness of the training given has been, not only the successful, but also the generally high standing of our graduates when qualifying before the State Board of Pharmacy. In this connection it may be noted that for the past few years we have provided the laboratory facilities and equipment necessary for conducting the practical part of the state examinations for those seeking to qualify before the state board.

The past year we have at last succeeded in inaugurating a dispensary service in connection with the Department of Student Health Service. This now gives the students in pharmacy a form of practical instruction and experience that cannot be over-estimated. The plan followed, in carrying out the service, is to assign two or more students to care for the work in dispensing each day, the work being directly under the supervision of one of the registered instructors in the Department of Pharmacy. One of the department rooms in the chemistry building was fitted up as a dispensing room, and while not as complete as it should be, nevertheless fills a long felt want.

Although not opened till the second semester the service offered has proven to be of the greatest value to the students who have generally taken advantage of the service provided. In order that one may get some idea of the service rendered it may be stated that from 25 to 50 prescriptions are filled a day. The coming year it will be the endeavor to increase the facilities, but at no time will any attempt be made to more than care for the service provided by the Department of Student Health Service.

It is quite gratifying to be able to report upon the greatly increased educational requirements for pharmacy now in force in the state. These are the result, not only of recently enacted laws, but also greatly increased standards demanded of applicants by the state board of pharmacy.

We now have not only a prerequisite law, but also one requiring that all persons qualifying either as assistant or registered pharmacist must be at least a high school graduate. These increased requirements have already served to stimulate the interest in pharmaceutical education and they place the state in the front rank of the states having high educational requirements for pharmacists.

In addition the American Conference of Pharmaceutical Faculties, of which this college is a member, has decided to adopt as a minimum requirement, a three-year course in 1925. This will mark, not only quite a step in the progress of pharmaceutical education, but in pharmacy generally. In order, therefore, that we may keep abreast of this educational progress we hope to anticipate this movement shortly.

#### FACILITIES

We feel that we would be indeed remiss in our duties did we not call attention to our present facilities. The past year has found our equipment and laboratory facilities taxed to their limit to adequately accommodate all our students, and with the outlook for increasing numbers the coming year, this difficulty must increase to a point beyond our means to provide. At present we are cramped for room in which we may use to the best advantage and store the equipment we now have. This fact necessitates the repeated handling of the materials used for demonstrating purposes many times. All this extra and needless work takes the time of the instructors from their more important duties. In addition, small laboratory sections must be repeated under conditions not calculated to render the most efficient service. We trust, therefore, that the foregoing facts may be noted and plans made for providing relief just as soon as conditions will permit.

It is also quite desirable that steps be taken at an early date toward the establishment of an experimental drug garden, for the purpose of studying the general growing conditions most favorable for furnishing active drugs. Such a garden would be of the greatest value in studying the quality, the variability in composition and in standardizing the drugs grown. Operated in conjunction with the Department of Pharmacology, it should be capable of



yielding data of the greatest value in medicine and pharmacy. The great scarcity of reliable crude drugs during the recent world war certainly emphasized the importance of the work.

#### RESEARCH

Prof. E. D. Davy has been studying several pharmaceutical problems and has contributed to the programs of the Section on Practical Pharmacy and Dispensing of the American Pharmaceutical Association.

Prof. Dye has served as chairman of the Section on Education and Legislation in the American Pharmaceutical Association and as chairman of the Section on Education in the state association, in both instances contributing papers on various phases of pharmaceutical education. In addition he was elected a member of the Revision Committee of the U. S. P., and in this capacity will carry on a number of original studies on problems relating to the work of revision of the three sub-committees of which he is a member: Namely in (1) botany and pharmacognosy, (2) in ointments and cerates and other galenicals, (3) on water, solutions and other aqueous preparations.

During the year general conditions in pharmacy have greatly improved and with this improvement has come a greater interest in the technical as well as commercial development of the subject. There has been a greatly increased interest shown in all forms of association work as well as the educational advances previously mentioned. As a result of this increased interest the demand for well-trained men, at salaries comparable to those received in other technical fields, has been far beyond our ability to supply, and for these and other reasons, we feel that the outlook for the college the coming years is indeed most promising.

Respectfully submitted,

CLAIR A. DYE,  
*Acting Dean.*

## COLLEGE OF VETERINARY MEDICINE

*President W. O. THOMPSON, Ohio State University.*

DEAR SIR: I have the honor to present to the President and Board of Trustees the annual report from the College of Veterinary Medicine for the year ending June 30th, 1920.

## GENERAL REMARKS

During the past year several more of the private veterinary schools of this country closed their doors. At present only three are left and it will be only a matter of months until they also will go out of business. This leaves veterinary education practically in the hands of the state schools, of which there are at present fourteen in good standing. The student population of the state schools in November, 1919, was as follows:

Alabama Polytechnic Institute .....	45
Colorado Agricultural College .....	86
Georgia State College .....	16
Iowa State College .....	107
Kansas State Agricultural College .....	83
Michigan Agricultural College .....	31
New York State Veterinary College (Cornell) .....	105
New York State Veterinary College (N. Y. Univ.) .....	33
North Dakota Agricultural College .....	12
Ohio State University .....	102
Ontario Veterinary College (Canada) .....	78
University of Pennsylvania .....	55
Texas Agricultural and Mechanical College .....	14
State College of Washington .....	45
Total .....	812

It will be noted that Ohio State had within two or three as many students as any other veterinary school in the country.

There are approximately 16,000 veterinarians in the United States. The average time the veterinarian spends in the profession is about twenty years. This would mean that each year 800 veterinarians should graduate from the schools of the country. At present there are something like 1,200 students in the state and private veterinary schools of North America. Assuming that 25 per cent. of these will graduate each year, the output is 300 or three-eighths of what it should be to keep up the supply. While horse practice has fallen off, which has seriously affected individual practitioners, nevertheless the value of the other domesticated animals, especially cattle, has more than compensated for this loss. The field of veterinary medicine is constantly increasing and the emoluments of veterinary service are greater today than they ever were in our history. The demand for men as teachers, investigators, and in the commercial field is greater and at better salary than ever before known. Under the new reorganization bill just passed a veterinary corps has been



organized in the Medical Department of the Army. Veterinary officers are now placed on the same plane with medicine and dentistry and in rank may ultimately reach the grade of full colonel.

While it is probable, due to the peculiar economic conditions which prevail, that there will be some falling off in the veterinary student population of the country for the next year or two, eventually, as the demand becomes emphasized through lacking supply, compensation will come in the increasing numbers of young men who will enter the profession. The live stock industry of the country represents \$8,000,000,000. The losses from preventable diseases alone run up into the millions. It is not likely that animal husbandry will ever wane in America, for as long as the population continues to grow so must the live stock increase to furnish food and to a certain extent power to supply it. The outlook therefore for the veterinary school is brighter today than it ever has been, especially since the entrance requirements have been uniformly increased and the curriculum lengthened.

#### FACULTY

During the past year several changes have occurred in the teaching staff of the College. Dr. Russell L. Mundenk accepted an offer at more than double the salary paid him by the University, leaving our service in October, 1919. Dr. Jas. D. Grossman, late associate professor of veterinary anatomy at Ames, Iowa, was selected to take his place. Dr. Grossman has rendered very excellent service, is most cooperative, courteous and gentlemanly in his relations with colleagues and never utters a complaint.

Dr. A. G. G. Richardson, professor of veterinary pathology, will resign at the end of the present academic year to accept a position which he formerly held in the University of Georgia. He gave this University eleven years service and was a most genial and gentlemanly individual. Dr. Leonard W. Goss has been chosen to succeed him. Dr. Goss is an alumnus of this University, but for the past thirteen years has been professor of veterinary pathology at the Kansas State Agricultural College. In this capacity he did a great deal of original work on the diseases of animals, especially with black-leg, a serious cattle disease of Kansas, which made for him an international reputation. Dr. Goss is a splendid teacher, an excellent research man, cooperative, loyal and of most pleasant address. I feel sure his appointment will not only be most pleasing to the alumni, which now number 700, but will add greatly to the reputation of the College.

Dr. S. Sisson, who has been on sick leave since July, 1919, finds that his health is now so improved as to permit of his return to the University and his work this fall. With his return and the addition of Dr. Goss to the teaching staff it is felt that this College will possess as well rounded out, experienced and reputable a faculty as can be found in any similar college in the country.

#### CLINICS

The Clinics, held daily in the Clinic Building, are steadily increasing. During the past academic year there were presented for treatment at the Vet-

erinary Hospital 7,068 cases, an increase over the preceding year of 779. The Clinics have been self-supporting. No better clinical facilities are found anywhere in the country.

#### BUILDINGS

A building for a horseshoeing shop, cold storage plant, ambulances and for vehicles left at the Clinic from time to time by owners, should be provided. This building need not be large, but should be so constructed as to form the nucleus of a larger one later.

#### BETTERMENTS.

As stated in my last report money should be available to foster original research, especially along the lines of applied pathology and bacteriology in this College. Inasmuch as neither the Agricultural Experiment Station nor the Bureau of Live Stock Industry of the State Board of Agriculture are seriously attempting to cope with the many disease conditions menacing the animal husbandry of the state, it becomes doubly proper for the University to undertake some of this work. Since Dr. Goss will have joined the staff by the opening of the University next fall, greater reasons exist than ever before for the establishment of serious, well directed work in veterinary research. This will not only greatly increase the popularity of the College with the stockmen of the country, but will also attract a few young men each year who expect to make veterinary research their life's work, but who to date have been forced to go to other states offering better advantages in this regard.

Respectfully submitted,

DAVID S. WHITE,  
*Dean.*



## THE GRADUATE SCHOOL

DR. W. O. THOMPSON, *President, Ohio State University.*

DEAR SIR: I have the honor to present to the President and Board of Trustees the annual report from the Graduate School for the academic year ending June 30th, 1920.

## REGISTRATION

Since the declaration of war two factors have operated to diminish the attendance in the graduate schools of our universities. In the first place the men registered in these graduate schools were practically all subject to draft in the army. It was inevitable, therefore, that the attendance should be greatly diminished during the period of the war. Again, after the war was over the demand for college graduates, especially in the industries and business organizations, became so great and the salaries offered were so large that many students who under ordinary conditions would have entered graduate schools in reality entered at once upon their life work.

The table below gives the attendance in our Graduate School during each year since its organization. This is typical of the registration in graduate schools in general. It will be noted that the attendance increased gradually until the declaration of war, after which it declined, reaching the lowest point for the academic year 1918-1919. It has increased notably for the academic year 1919-1920 and there is no reason to doubt but that it will gradually surpass the pre-war registration.

Year	Summer Session	Academic Year	Total
1911-12		97	97
1912-13	81	128	209
1913-14	60	151	211
1914-15	113	185	298
1915-16	112	244	356
1916-17	154	237	391
1917-18	158	161	319
1918-19	113	143	256
1919-20	127	209	336

The following table gives the distribution of students according to the departments in which the major and minor work was taken:

Departments of Instruction	Major	Minor
Agricultural Chemistry	13	6
American History	13	14
Anatomy	2	2
Art		1
Astronomy		3
Bacteriology	9	12
Botany	10	12
Ceramic Engineering	1	1
Chemistry	60	46

	Major	Minor
Dairying .....	2	
Economics .....	14	41
Electrical Engineering .....	1	
English .....	49	32
Entomology .....	4	1
European History .....	20	15
Farm Crops .....	3	3
Geology .....	2	3
German .....	2	4
Greek .....	1	
History of Education .....	2	2
Journalism .....		2
Latin .....	2	3
Mathematics .....	10	12
Mechanical Engineering .....	1	2
Mechanics .....		2
Metallurgy .....		1
Mineralogy .....		4
Pharmacy .....		1
Philosophy .....	5	8
Physics .....	8	14
Physiology .....	1	2
Political Science .....	5	8
Psychology .....	25	25
Public Health .....	3	9
Romantic Languages .....	27	31
Rural Economics .....	4	4
School Administration .....	19	18
Sociology .....	14	12
Zoology .....	4	7
	336	336

\* The distribution of students according to colleges and universities from which they received their baccalaureate degrees is as follows:

Akron University .....	1
Allegheny College .....	2
Antioch College .....	2
Arizona .....	1
Baldwin Wallace College .....	3
Berea College .....	1
Bethany College .....	4
Bluffton College .....	1
Bowdoin College .....	1
University of California .....	1
Capital University .....	6
Cedarville College .....	2
Chicago University .....	2
Cincinnati University .....	4
Dartmouth College .....	1
Defiance College .....	2
Denison University .....	16
DePauw University .....	1
Drury College, France .....	1
Earlham College .....	1



Fiske University .....	1
Government Institute of Technology .....	1
Grinnell College .....	2
Grove City College .....	1
Harvard University .....	1
Heidelberg University .....	1
Hillsdale College .....	1
Hiram College .....	5
Hope College .....	2
University of Illinois .....	1
Indiana University .....	1
Lake Erie College .....	1
Lehigh University .....	1
Lennox College .....	1
University of Maine .....	1
Manchester College .....	4
Marietta College .....	4
Mass. Ag. College .....	1
Mercer University .....	1
Miami University .....	8
Michigan University .....	1
University of Mississippi .....	1
University of Missouri .....	1
Mt. Holyoke College .....	1
Mt. Union College .....	4
Muskingum College .....	7
University of Nebraska .....	2
New Hampshire State College .....	1
Oberlin College .....	2
Ohio University .....	14
Ohio Northern University .....	9
Ohio State University .....	127
Ohio Wesleyan University .....	19
Oregon Agricultural College .....	2
Otterbein .....	7
Peking Government College .....	1
Princeton .....	1
Purdue .....	1
Randolph-Macon College .....	1
Ripon College .....	1
Scio College .....	1
Smith College .....	1
University of South Carolina .....	1
South Dakota State College .....	1
Southern Normal College .....	1
Stanford University .....	2
University of Texas .....	1
Ursinus College .....	1
Valparaiso College .....	1
Vassar College .....	5
Wabash College .....	1
Washington Teachers College .....	1
Westminster College .....	1
West Virginia University .....	6

Wilberforce University .....	3
Wilmington College .....	3
University of Wisconsin .....	2
Wittenberg College .....	6
Wooster College .....	3
Total.....	336

The total number of degrees granted each year since the organization of the Graduate School is as follows:

	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17
M. Sc. ....	3	8	6	14	15	25	35
M. A. ....	24	31	49	42	61	70	60
C. E. ....	..	..	..	..	..	..	..
Ph. D. ....	1	5	1	2	1	3	11
Totals .....	29	44	56	58	77	98	106

  

	1917-18	1918-19	1919-20	Totals
M. Sc. ....	21	11	32	170
M. A. ....	36	35	36	444
C. E. ....	..	1	..	1
Ph. D. ....	9	6	7	46
Totals .....	66	53	75	662

#### FACULTY ACTION BEARING UPON THE WORK OF THE GRADUATE SCHOOL

During the present year the University Faculty has passed two resolutions which have an important bearing upon the work of the Graduate School. In the first of these the opinion is expressed that all recommendations pertaining to the budget of those departments in which both graduate and undergraduate work is offered, should be made conjointly by the Dean of the Graduate School and the Dean of the College concerned. This principle, in a general way, was put into practice in the formulation of the budget for the year 1920-21. There is no doubt but that this practice will have a stimulating effect upon the work of the Graduate School without in any way prejudicing undergraduate instruction. In the second resolution the Faculty expressed its conviction that members of the instructional force who show unusual ability for original investigation should have their teaching load reduced below the normal to an amount commensurate with the extent and importance of the investigations under way. This resolution recognizes the validity of a general principle which obtains in all universities but to a less extent in the Ohio State University than efficiency demands.

#### DEVELOPMENT OF THE GRADUATE SCHOOL

The Graduate School was organized in 1911. Sufficient time has now elapsed to make it worth while for us to study carefully the history of the school with a view to determining its strength as well as its weakness. In a brief report one can only note a few of the most salient points.

In the first place it may be stated that from the standpoint of attendance and of the number of degrees granted the Graduate School has had a satisfactory and normal development. It is not to be expected, neither is it to



be desired that the growth should be a rapid one. Time is required to provide the necessary equipment and to bring to a high state of development in the University that spirit of productive scholarship which is the very soul of any graduate school. It must be confessed candidly that our Graduate School has not yet reached a stage of development commensurate with its importance to the state. The great majority of the graduates of Ohio colleges who continue their studies still register in the graduate schools of universities situated beyond the boundaries of our own state. Such a change of environment on the part of the student is often desirable, but our own University in return ought to attract like numbers of students from other states. It is true that many such students do register in our Graduate School, but the number is not so large as it ought to be.

Our chief weakness at present seems to be a lack of spirit of productive scholarship. I do not mean that such a spirit is entirely wanting, for the amount of research work carried on in the University is commendable and is gradually increasing. However, this spirit is not so highly developed as in many universities with which we like to associate ourselves. This fact has been a matter of grave concern to many members of the instructional staff. It must be that the environment has not been ideal for the growth of this spirit. Personally I believe that the President of the University remedied a very serious defect in our system when, this year for the first time, he gave to the Dean of the Graduate School the same rights and privileges pertaining to the budget as to the Deans of the Colleges. Moreover, there is no doubt but that in the budget for the academic year 1920-21 an honest effort was made to reward and encourage productive scholarship. Such scholarship is absolutely essential to the development of graduate work. Good teaching alone, important as it is, will never attract graduate students to any extent. Such students, on the other hand, will cross the continent and the ocean to study with men renowned because of their productivity.

Again, the action of the Legislature which made it possible to increase the salaries of the members of the instructional staff should have a marked influence upon work of the Graduate School, inasmuch as it will not only enable us to retain our strongest men, but also to bring to the University men of promise and renown. It must be kept in mind, moreover, that with men of high scholarship salaries are not the only, if indeed they are the main consideration. Such men look rather to the facilities which the University offers them for the pursuit of their work. In some departments of the University the equipment, both as to apparatus and library facilities, are such as to make a high grade of research work possible; in others, especially those in which the research work is wholly or largely dependent upon library equipment, there is still a serious lack of such facilities.

While our progress has not been as marked as we should have liked, nevertheless we have now reached a stage when we may confidently expect better results. We have been able to find out our mistakes and our weaknesses and are now in a condition to overcome them. In our efforts to build



up the Graduate School we have the hearty cooperation of all the Ohio colleges. Those engaged in the educational work of the State expect us to build up a Graduate School of the highest rank. It is true, however, that the great mass of our people do not appreciate the value of research work and this fact should not be overlooked in any educational campaign in which the University may engage. One or more bulletins might well be sent out narrating in a popular way the bearing of research work upon the welfare of our State.

#### FUNCTIONS OF THE DEAN

It has always been my belief that the Dean of the Graduate School ought to visit each department offering graduate work for a conference with the teaching staff at least two or three times a semester. In this way it would be possible for the Dean to offer suggestions, coordinate the researches carried on in different departments, and in general to keep in touch with all the research work on the campus. In connection with these visits the Dean ought to have at his disposal sufficient funds to make it possible to encourage meritorious work. Such encouragement could be given by providing the necessary equipment and by relieving those doing such work from all routine duties, and in exceptional cases even relieving them for a limited period from some or all of their teaching. To carry out such a program, however, would require that the Dean should give practically all his time to this work.

Notwithstanding the limited time at my disposal, I have attempted during the second semester of the current year to put the plan outlined above into operation. Accordingly a letter was sent to the different departments offering graduate work stating that the Dean would be glad to meet with the instructional staff of the department for the purpose of discussing any questions pertaining to the work of the department in its relation to the Graduate School. As a result ten different departments were visited. It is believed that these visits were conducive to good results and that the system, if continued, will add greatly to the effectiveness of the graduate work.

#### THE RESEARCH WORK OF THE STATE

Research work and the Graduate School go hand in hand. Since our University is a state institution, it would seem to be the part of wisdom that there should be at least a very close cooperation between our Graduate School and all those engaged in research work supported by the State. Such cooperation now exists in the case of Ohio and Miami Universities, and the Ohio Agricultural Experiment Station. In a more limited way there is cooperation in the research work conducted in some of our state hospitals. It would seem possible to make this cooperation more complete. This question is being studied and it is hoped that the Graduate Council may work out some practical method for bringing about this result.

#### THE EFFECT OF THE WAR UPON RESEARCH WORK

The scientific achievements made during the progress of the war have been of the most profound importance. It may be, however, that even of greater importance is the lesson learned by the allied nations in regard to the



value of research work as a constructive agent in the advancement of the welfare of a nation. As President Schurman has stated, "it is by the enlargement of human knowledge that progress in civilization and improvement in the life and conditions of mankind are rendered possible." It was the results obtained during the war, however, that brought home to the different countries this great lesson and led the nations to take active steps to encourage and promote research in every possible way. And what is the result?

England already has appropriated over five million dollars as an initial endowment for a department of science and industrial research. Canada, Australia, Japan, and Italy have all taken similar steps, while the United States has established a National Research Council which is endeavoring to mobilize the scientific workers of the country and to coordinate their efforts so that the work may be carried on with the greatest efficiency. There is little doubt but that the next half century will witness the greatest achievements in scientific investigation ever made. Problems of the greatest importance to the welfare of the nation are awaiting solution. In all this work the universities have always taken the lead. There is little doubt but that they will continue to do so in the future. Our own University played an honorable part in the winning of the war. I trust and believe that it will continue to do its share in helping to solve the great problems now awaiting solution.

#### RECOMMENDATIONS

The following specific recommendations are submitted:

- (1) *Ample provision should be made for the publication of the results of important investigations carried on by the members of the instructional staff of the University.* The University at present is far behind most other universities in the extent of such publications. This is due not so much to lack of results of investigations worthy of publication as to lack of the necessary funds. The Graduate Council could have used to a good advantage during the present year at least \$2,500. Because of the lack of funds the publication of but two studies has been authorized. These are as follows:

- (a) The Tories of Pennsylvania, Wilbur H. Siebert.

- (b) Relation of Plant Succession to Crop Production, Adolph E. Waller.

During the present year the professors in at least one department of the University have been put to considerable expense in connection with the publication of important papers. To expect members of the instructional force to meet the expense of such publications which redound to the welfare of the University and from which the authors secure no monetary returns is not only unfair but it is absolutely fatal to the growth of productive scholarship.

In this connection it is worth while to ask the question whether the University has not now reached that stage of development which would warrant the establishment of a University Press. Our printing shop is already provided in a limited way with the necessary equipment for the printing of monographs and books. This question is now being considered by the Graduate Council and it is expected that recommendations will be made in the near future.

- (2) *An appropriation of at least \$10,000 annually should be made for the purchase of books, especially the large sets which are absolutely essential for the conduct of research work.* At present the library is lamentably weak along certain important lines. So long as this deficiency remains it is entirely out of the question for the University to secure the services of scholarly men in these fields of activity.

- (3). *The present appropriation for scholarships and fellowships should be continued.*
- (4). *An appropriation of at least \$2,500 should be placed at the disposal of the Graduate Council for the purpose of employing additional assistants to aid those engaged in investigational work.* Frequently the study of a problem entails a certain amount of work more or less routine in character. To ask a professor to engage in such routine work is the acme of inefficiency. During the present year a limited amount of money has been at the disposal of the Graduate Council for assisting in this way and it is the unanimous opinion of the members of the Council that the money so spent has been productive of the highest results.
- (5). *There should be an appropriation of \$500 for bringing lecturers to the University.* It is desirable that eminent scholars be brought here from time to time for a limited number of lectures. Intercourse with members of the instructional forces of other universities is always a source of inspiration and good will and the plan should be encouraged.
- (6). *Increased provision for graduate work should be made in those fields of study in which the teachers in our public schools are especially interested.* The value of graduate training for teachers is being recognized more and more. In a number of cities it is already possible for teachers who have had this extra training to obtain higher salaries. In Cleveland, for example, the maximum for teachers who have had one year of training subsequent to graduation is \$300 higher than those who have not had such an additional year, while a second year makes it possible to raise this salary by an additional \$200. As a result, the ambitious teacher will turn to the graduate school for additional training. It is the duty of the University to offer a program of studies that will make it unnecessary for such teachers to travel to distant states in order to obtain the work they desire.

In conclusion, I wish to express my own sincere appreciation to Professors Henry Russell Spencer and Wilbur H. Siebert, who in succession, acted as Dean of the Graduate School during my absence on war duty; also to Professor George Melville Bolling, who has relieved me of many onerous duties, as well as to all those who have the interest of the school at heart and are co-operating with the Graduate Council in its efforts to build up the Graduate School.

Respectfully submitted,

WM. MCPHERSON,  
*Dean.*



## REPORT OF THE DEAN OF WOMEN

*President W. O. THOMPSON, Ohio State University.*

DEAR SIR: I have the honor to present to the President and Board of Trustees the annual report from the Dean of Women for the year ending June 30th, 1920.

Owing to the nature of the "duties" involved, any report from this office must of necessity be rather one of efforts put forth and policy maintained than of tangible results.

It is the aim of your Dean of Women to cooperate with all other departments of the University in attempting to maintain a University grade of scholarship among women in particular, and to foster not merely a desire for high grades, but, if possible, a realization also of the value of honest, intelligent, and purposeful work.

This year's efforts may be summarized under three main divisions: first, the housing of women students; second, the following up of "Deans' reports" at mid-semester, and conditions and failures reported at the close of each semester, with a view to discovering possible causes of poor work; third, in supervising, be it ever so slightly, this modern social life and the women's organizations of the campus. Discipline cases may, in general, be classed under one of these divisions and attributed to causes connected with social conditions or lack of conformity with University scholastic or housing regulations. Individual conferences asked for upon unnumbered student problems are not easy to classify, some have been in regard to employment. Census cards of the first semester show a surprisingly large number of young women as meeting part of their own expenses.

MEETING ALL EXPENSES.  
(usually by previous earnings.)

Seniors. . . . .	6	Sophomores . . .	17
Juniors. . . . .	6	Freshmen . . . .	36

MEETING PART OF EXPENSES.

Seniors. . . . .	22	Sophomores. . . .	46
Juniors. . . . .	39	Freshmen . . . . .	85

It has not been possible to obtain figures, as yet, to show the cost per year for these young women at the University. Some few underestimated their expenses and found it necessary to ask for small loans in order to complete the year's work. There are loan funds subject to recommendation from this office which, although not large, are most generously administered by the organizations offering them, that is to say, City Pan-Hellenic, The Columbus College Club, and the Ohio State University Alumnae Association of Columbus.

Two conferences have seemed of sufficient importance to justify the absence from University duties. First, the Conference of Deans of Women of Universities and Colleges of the United States, held in connection with the N. E. A. at Cleveland, January 22-26, 1920. Papers and discussions of common problems of housing, social excesses, and discipline confronting educational institutions of various types were most valuable in showing means

which have been tried for meeting ever recurrent situations. New phases of women's education, developed to meet newly arising conditions, were also presented.

Your Dean of Women was sent as Councillor, representing the University, to the A. C. A. Council Meeting, April 7-9, 1920, at Cleveland. This is the business meeting of the Association at which the year's report is made and plans are presented for proposed activities. One of the important discussions was that of the policy to be maintained with regard to colleges asking for A. C. A. recognition, and also those colleges which, at one time met requirements and had been granted recognition, but fail to maintain their standard.

#### HOUSING

The first problem which confronted the new Dean of Women upon her arrival in August was that of housing the incoming students.

The list of approved houses for women, gotten out at the close of the preceding year, had been completely exhausted, but the demand for rooms continued. Various attempts to find additional rooming houses were made with little or no success. Just before the opening of the University the Columbus newspapers were appealed to for feature stories calling for rooms. They responded with such success that nearly one hundred rooms were offered for girls Monday and Tuesday of Registration Week. These rooms, according to the rules of the University, had to be inspected before they could be recommended to girls. Volunteer committees of faculty ladies divided the University district among themselves and for two days gave their time to inspection and reports on rooms. The city Y. W. C. A. held a certain number of rooms at the disposal of the University for registration period, and in this wise the large number of women who arrived without having previously engaged rooms were accommodated. It was, as may readily be seen, necessary to accept rooms which under normal conditions would not have been considered. In certain cases it was possible later, as withdrawals occurred, to transfer students into more desirable locations, in other cases students continued to live under conditions not conducive to academic interest or social improvement, and without adequate supervision as to health or conduct. Specific instances are out of place in such a report; one case may, however, be noted, namely, a residence in which it was necessary for the young women to pass around the bed occupied by the householder and her husband as they left for their eight o'clock classes, or returned after dances in the evening. The condition had been further complicated by influenza in the house at the time it was reported.

In order to lessen the unwieldy September demands for accommodations, students enrolled in the University and planning to return were urged to engage rooms in June, and every effort is being made now to help prospective students reserve their rooms as soon as they have been accepted by the Entrance Board.



A re-survey of approved houses was necessitated this spring by a marked rise in the prices asked and by the closing of many of the houses formerly available for women students. The Y. M. C. A. made a house to house canvass to determine houses available for student use; these lists were not encouraging in that they showed very few houses open to women students which were not already recorded in this office. Three factors seem to have entered into the actual reduction in number of rooms for women students for the coming year. Some of the homes, opened because of an emergency appeal made at the last moment in the fall, were unfortunate in the girls whom they received, and who, because of the overcrowded conditions, which made it possible for this office to maintain adequate supervision, made themselves quite a burden to the household into which they went. Other houses which have heretofore been on our list have found men, and particularly business people, more profitable and less trouble than University girls. The third reason seems to have developed from the fact that many of these houses have been sold, under the increased tendency to reduce costs, to larger families, hence there is no "spare room" to be rented to students.

The new Housing Assistant will come into the difficult task, August 1st, of finding rooms for about four hundred young women before the opening of the fall semester.

#### SCHOLARSHIP

Although the "Deans' reports," sent out at mid-semester, do not by any means indicate certain failure in the courses reported, nevertheless, a copy of all these reports was obtained from the Secretaries of the various colleges and every young woman who received more than one such warning was asked to come into this office. In many cases an interview disclosed reasons for poor work. Some freshmen were for the first time in large classes, in other cases the home duties or the necessity for earning a large portion of the expenses left the student with too little time for study; in a few instances mental caliber was apparently too low for university grade of work, or preparation insufficient. There were also a number of social butterflies and classroom parasites, among them some with sufficient alertness and ability to do satisfactory work, when pressure could be brought to bear upon them to require it. A relatively small but interesting per cent. of those interviewed said they would rather fail or be conditioned than succeed with the open books and prepared "ponies" which brought the quiz and examination standards above a normal level. An attempt was made to meet the difficulties which each case revealed. Statistics may be of interest:

Total number of girls in University	1611
(based on 1st semester figures)	
Columbus girls	685
Out-of-town girls	926
Sorority girls (including pledges)	420
Columbus sorority girls	175
Out-of-town sorority girls	245

Statistics compiled for Sorority Committee at close of First Semester, by colleges reporting incomplete work:

College	Total Reported	Town	Out of Town	Sorority
Arts .....	90	65	25	23
Agr. ....	29	10	19	4
Edu. ....	31	17	14	4
		Town Sorority	Out of Town Sorority	
Arts .....		20		3
Agr. ....		2		2
Edu. ....		3		1

For the year closing June, 1920 (Second Semester report):

College	Total Reported	Town	Out of Town	Sorority
Arts .....	236	139	97	64
Agr. ....	84	17	67	21
Edu. ....	90	41	49	20
A-E .....	11	4	7	3
	Non-Sorority	Town Sorority	Out-of-Town Sorority	Phys. Edu. Con. Def. Fail.
Arts .....	172	44	20	108
Agr. ....	63	8	13	26
Edu. ....	70	14	6	35
A-E .....	8	1	2	8

It is also interesting to note that low grades in other classes are in many instances combined with unsatisfactory gymnasium reports. Only in rare instances were there substantial reasons given for physical education failures.

Several of the colleges, which have a heavy enrollment of women, have of late made a practice of sending petitions for reduced schedules for women through this office in order to obtain, before dealing with such petitions, any additional information on hand here.

Copies of unsatisfactory grades received by members of each sorority were sent to respective presidents of these groups with the request that their scholarship committee take the matter up. They have, in almost every instance, shown a most encouraging interest in these reports, two or three sororities have passed new rules demanding an average of A for initiation.

Practically all women's organizations on the campus, excepting social fraternities, now require their representatives to meet the eligibility requirements for important committee work or participation in any event, athletic or otherwise. Rule No. 3 of the "Point System," put into effect this spring, stipulates an average of A required for holders of "major offices." A very great effort has, on the other hand, been made to counteract the temptation to gain necessary grades by dishonest methods. "Cheating to keep eligible" is an attitude which must disappear.

#### STUDENT LIFE

Very little has been possible this year in the way of constructive improvement in social conditions among women students.



This problem is, as in every institution of its type, double; on the one hand are the few girls, not more than three or possibly four hundred, whose social program is so heavy as to make class work almost impossible, not all sorority girls are to be included in this list, but it is the exceptional non-sorority girl who finds herself classed as a "social success." It is this comparatively small group whose social functions, late dances, and expensive parties, are so numerous that the University Social Committee can with great difficulty restrict them to week-end nights.

The second group, less conspicuous ordinarily, although much larger than the first, is none the less in need of consideration and interest. These are the students for whom there is no recognized University social life, no supervised opportunity for meeting their fellow students. The girl in this group is too prone either to have no friends or to find her good times by means which may not be morally wrong, but which lower her own self respect and certainly do not produce the type of college woman this University is seeking to develop.

It has been most gratifying to find the students themselves anxious for the establishment of some law and "good form" in social affairs. The University Women's Pan-Hellenic passed a ruling last year that no student dance should continue after 1 A. M., but they had no authority to enforce their ruling, hence dances continued to be held until 3 and 4 o'clock. When Faculty Social Committee took up the matter of chaperons and hours for dances, student sentiment was strongly back of the committee, and on every hand the hope was expressed that faculty would really do something to enforce the rules. If the drastic faculty action in regard to the failure of one sorority to comply with regulations could be followed by one or two other such moves, the respect among the students would materially increase. Although there have been many unlisted dances, the Social Committee has registered one hundred and fifty-three dances, one hundred and one fraternity, twenty-seven sorority, and twenty-five others. These figures do not include dinners, house parties, and dances given by Columbus students as individuals. Is it any wonder that grades suffer?

It must not be forgotten, however, that the city society girl is in large measure continuing what she learned in 3 A. M. High School dances, and unlimited hours for automobiling, picnics, etc., while the other type of young woman who is away from a quiet home and is spending money for the first time tends to substitute for home customs which seem old-fashioned, the most extreme forms she sees about her, without even the canny of the girl who has lived in the "meaningless maelstrom of society."

#### WOMEN'S ORGANIZATIONS

Women's organizations, class organizations, and all forms of unification have been strongly encouraged. Because of the numbers involved it is impossible to create and maintain one unit, but experience has seemed to prove that individuals organized in small units can be held together for a common purpose far better than an equally large number unorganized. It is therefore the hope of the leaders among the women of Ohio State University that the

Y. W. C. A., Women's Council, Woman's Athletic Association shall, together with the office of the Dean of Women, so organize and unify women students that there may be created real University ideals and loyalty.

#### PLANS

The greatest change which is planned for the coming year is in the introduction of a Housing Assistant to the Dean of Women, Miss Mary Louise Brown, a graduate of Smith College, and M. A. from the University of Missouri, comes to Columbus with the highest recommendations after having completed a survey of housing conditions at the University of Missouri last year. It is the plan to have Miss Brown assume in large part the duties of actual inspection of houses for initial approval and thereafter to keep herself informed of conditions existing in these houses. There will, in all probability, be between 100 and 125 houses on this list. Miss Brown will also meet the great number of interviews pertaining to minor matters of adjustment between householder and student in regard to prices, heat, light, and house conditions for study and entertainment. She will at the same time be in search of new and better housing facilities for women.

The Dean herself will in this way be given more time for constructive work, for closer supervision of scholastic, moral, and social conditions, and also it is hoped, for a broader personal acquaintance and influence among women not called into the office for disciplinary matters.

As this year closes, Mr. President, your Dean of Women can report a very busy year, and one spent, it would seem, largely in getting acquainted with faculty, students, and campus traditions. During this time she has met with the most cordial personal welcome on every side, which encourages her to hope that the office of the Dean of Women may be recognized as acting in cooperation with all departments of the University for the support and further development of high scholastic and moral ideals.

Respectfully submitted,

ELISABETH CONRAD,  
*Dean of Women.*



## APPOINTMENT COMMITTEE

*President W. O. THOMPSON, Ohio State University.*

DEAR SIR: The following is a preliminary report of the Appointment Committee. This report has not been presented to the Committee as a whole since the only purpose of the report is to present to you a few of the activities of the Appointment Committee within the last six months. I am presenting these facts in the hope that you might find something worth while in them which you would care to use in your annual report.

Beginning January 1, 1920, the Appointment Committee faced several problems which heretofore had not come up and concerning which I am somewhat in doubt as to the procedure as far as the Appointment Committee is concerned. Many industries, including manufacturing concerns, are writing to the University asking for recommendations for their needs. These letters have uniformly been sent to the Appointment Committee for answer, and in the last six months I have answered them as best I could.

The Deans of various colleges are sending their young men and women to the Appointment Committee to enroll, and within the last two weeks I have located at least ten graduates of the College of Commerce and Journalism. I am presenting this phase of the work to you hoping for advice and direction.

The demand for teachers from January to perhaps the first of April was much greater than the supply, and during that time the Appointment Committee located in positions some fifty or fifty-one graduates who completed the school year in these teaching positions. Beginning about May 1 we began to enroll graduates for the present year and former graduates for positions for the next school year. These enrollments to the present time are at least two hundred and twenty-five students with several enrolling each day. The big problem of the Appointment Committee during June was to adjust the salary demands of the teachers to the maximum amounts that Boards of Education are able to pay for the service. Last year our average salary for beginning teachers was \$900.00. This year the average salary for beginning teachers is \$1,200.00. A few beginning teachers are accepting \$1,100.00 to \$1,150.00 in larger cities in order to be able to teach one or two subjects. The villages and other smaller schools are paying a minimum of \$1,200.00.

Two features outstanding in the work of the Appointment Committee this year should be mentioned. The first is the universal demand within and without the State of Ohio for Ohio State University graduates. The second, the fact that in practically every county of Ohio in all kinds of schools from the centralized rural school to the largest cities in the state will be found graduates of the last two or three years teaching in their school systems. We have had many calls for teachers from Cleveland, Youngstown, Akron and Toledo among the larger cities.

The problem facing the Appointment Committee at this time is to induce some of our inexperienced graduates to go into the smaller schools where there is an opportunity to render perhaps greater service in teaching than anywhere else.

#### RECOMMENDATIONS

The Chairman of the Appointment Committee recommends that next year the Chairman be given better facilities for accomplishing the work.

Respectfully submitted,

J. L. CLIFTON,  
*Chairman.*



## STUDENT HEALTH SERVICE

*President W. O. THOMPSON, Ohio State University.*

DEAR SIR: I have the honor to present to the President and Board of Trustees the annual report from the department of Student Health Service for the year ending June 30th, 1920.

## HEALTH OF THE STUDENT BODY

The general health of the student body this year has been good except during an epidemic of influenza which occurred in a mild form between January 12th and March 1st. It is interesting to note the increasing interest shown by the student in the early treatment of trivial ailments, and although over 3,000 different students were treated this year and 10,040 office consultations were held, comparatively little serious illness occurred. We believe that much sickness was prevented by timely advice and treatment. Attention is called to the large number of women students treated this year since a nurse has been added to the staff. On account of not having sufficient help for our clerical work, no accurate record was kept of the amount of time lost by the student in university work through sickness and accident, but it is safe to say that fully one-half of it was preventative and we hope next year, with the help which has been provided, to present some interesting data along this line.

## PROGRESS

The work of the department increased so rapidly during the first semester that the Board of Trustees kindly provided a full time trained nurse. This has enabled us to do more and better work than heretofore. They also made provision for a full time stenographer who is to begin work in the fall.

The College of Pharmacy, cooperating with this department, established a dispensary in the Chemistry Building early in the second semester. This is to become a permanent feature of our work. Here prescriptions are filled and medical supplies are sold to the student at cost.

The State Department of Health is also cooperating by promptly examining all specimens of sputum, blood, smears, etc. This is a great help and relieves us of a lot of laboratory work.

The Y. M. C. A. Health Committee have been doing a good work by calling for reports daily and visiting students who are discouraged or too ill to attend classes and need help.

## BOARDING AND ROOMING-HOUSE INSPECTION

One of the weak points in our service is that no provision is made for inspection of boarding and rooming-houses. No scheme of health service can be complete without this supervision. Many cases of illness may be traced directly to poor living and housing conditions and this should receive our early attention.

## ANOTHER PHYSICIAN NEEDED

Our present staff is too small to properly care for all the sick and make the inspection mentioned above, besides there is quite a large amount of eye, ear, nose, and throat trouble to care for each year. Therefore I earnestly request that another physician be appointed as soon as possible. One whose training and sympathies are along the line of public health and who has had special training in eye, ear, nose, and throat work.

## DENTAL WORK

The demand for dental service on the Campus seems greater than ever and if we are granted more working room a dental clinic should be established in connection with the department.

Without doubt this has been the most successful year in the history of this service.

A statistical report of the year's work is presented on the following pages.

## NUMBER OF STUDENTS TREATED

3,945 students were treated as follows:

1st Semester .....	1,913
2nd Semester .....	2,032
Total .....	3,945
Duplicate students treated both 1st and 2nd Semester .....	917
Total number of individual students treated.....	3,028
Total number of male students.....	2,650
Total number of female students.....	378
Total ....	3,026

## OFFICE VISITS (Consultations held)

1st Semester .....	4,434
2nd Semester .....	5,606
Total .....	10,040

## AVERAGE DAILY OFFICE VISITS

1st Semester.....	47
2nd Semester ....	62

Respectfully submitted,

H. SHINDLE WINGERT, M. D.,  
*Director of Student Health Service.*



## REPORT BY CLASSES

1st Semester		2nd Semester	
Freshmen.....	1,040	Freshmen.....	581
Sophomore.....	410	Sophomore.....	262
Junior.....	240	Junior.....	150
Senior.....	116	Senior.....	90
Employes, Graduates, etc.....	107	Employes, etc.....	32
Total.....	1,913	Total.....	1,115
		Duplicates.....	917
		Total.....	2,032

## REPORT BY COLLEGES

1st Semester		2nd Semester	
Arts.....	705	Arts.....	402
Engineering.....	528	Engineering.....	305
Agriculture.....	343	Agriculture.....	201
Education.....	56	Employes, etc.....	47
Commerce and Journalism.....	50	Education.....	46
Vet. Medicine.....	31	Commerce and Journalism.....	30
Pharmacy.....	30	Dentistry.....	20
Dentistry.....	24	Pharmacy.....	20
Law.....	17	Law.....	18
Medicine.....	15	Vet. Medicine.....	17
Employes, etc.....	112	Medicine.....	9
Total.....	1913	Total.....	1,115
		Duplicates.....	917
		Total.....	2,032

## CONDITIONS TREATED

	Semester	
	1st	2nd
Abcess Alveolar.....	15	12
Abcess Others.....	16	24
Acne Vulgaris.....	24	18
Adhesions.....	2	0
Adenitis Cervical.....	7	8
Adenitis Inguinal.....	2	5
Adenoids.....	3	1
Alopecia Areata.....	4	1
Amenorrhea.....	5	14
Angina Pectoris.....	1	5
Anaemia.....	5	3
Anus Fistula.....	1	3
Aortic Regurgitation.....	2	1
Appendicitis.....	8	5
Arthritis Acute.....	4	4
Asthma.....	4	1
Blebharitis Marginalis.....	2	4
Bronchitis Acute.....	92	107
Bronchitis Chronic.....	3	2
Bursitis.....	3	4

## CONDITIONS TREATED

	Semester	
	1st	2nd
Callositas .....	14	27
Clavus .....	18	9
Carbuncle.....	4	7
Carcinoma.....	2	0
Caris Dental .....	45	19
Catract .....	1	0
Cerumen Impacted.....	34	21
Chalazion .....	2	0
Chickenpox .....	5	4
Cholecystitis Acute .....	1	0
Chillblains .....	2	8
Conjunctivitis .....	32	36
Constipation Symptomatic.....	69	60
Constipation Chronic.....	27	12
Concussion Brain.....	3	0
Coryza.....	238	203
Cyst Sebaceous .....	4	1
Cyst Dermoid.....	1	3
Cystitis .....	10	6
Dermatitis:		
Calorica.....	53	72
Medicamintosa.....	3	1
Venenata.....	7	18
Seborrhoea .....	0	1
Diphtheria .....	1	0
Dislocation:		
Finger .....	1	5
Knee .....	3	0
Forearm ulna.....	1	0
Shoulder .....	0	1
Wrist .....	0	1
Dysmenorrhea .....	5	16
Eczema.....	34	19
Endocarditis .....	1	0
Emphysema .....	1	0
Enteritis Acute.....	20	12
Enterocolitis .....	1	0
Epistaxis .....	7	7
Epididymis .....	1	0
Epilepsy.....	1	0
Erysipelas .....	1	0
Erythema:		
Intertrigo.....	16	39
Multiform .....	4	18
Nordosa .....	5	2
Exostosis .....	1	0
Eye Strain .....	69	20
Fistula .....	2	1
Flat Foot:		
First Degree .....	12	4
Second Degree!.....	9	1
Food Poisoning .....	10	3



## CONDITIONS TREATED

	Semester	
	1st	2nd
Foreign Body:		
Eye .....	33	37
Ear .....	0	2
Face .....	0	2
Finger .....	5	17
Foot .....	0	1
Hand .....	3	1
Leg .....	4	3
Fracture:		
Clavicle .....	1	0
Hand .....	1	0
Nose .....	5	0
Rib .....	2	3
Toe .....	1	1
Furunculosis .....	74	82
Ganglion .....	2	2
Gastralgia .....	31	22
Gastritis Acute .....	10	11
Goitre .....	5	7
Gonorrhea .....	13	3
Globus Hysterious .....	3	1
Hay Fever .....	1	0
Heart and Lung Examinations .....	34	20
Helmatoma .....	2	4
Hemorrhoids .....	11	9
Hernia:		
Inguinal .....	10	4
Scrotal .....	2	0
Herpes:		
Simplex .....	26	31
Progenitalis .....	2	1
Zoster .....	4	2
Hiccough .....	4	9
Hordeolum .....	8	22
Hydrocele .....	1	0
Hygiene Advice .....	92	167
Hyperhidrosis .....	2	17
Hysteria .....	0	3
Impacted Molar .....	9	14
Impacted Cerumen .....	19	29
Impetigo Contagiosa .....	17	9
Indigestion .....	42	34
Impotence .....	1	0
Infection:		
Ankle .....	1	3
Arm .....	15	6
Back .....	1	0
Ear .....	2	0
Face .....	1	0
Finger .....	14	17
Foot .....	12	18

## CONDITIONS TREATED

	Semester	
	1st	2nd
Hand .....	6	1
Knee .....	4	8
Leg .....	16	9
Toe .....	15	30
Influenza .....	49	127
Ingrowing Nail .....	6	13
Insect Bite .....	2	5
Insomnia .....	5	3
Intestinal Obstruction .....	1	0
Iritis .....	3	1
Jaundice .....	2	5
Laryngitis .....	26	44
Leucorrhoea .....	0	2
Liver Congested .....	29	22
Lumbago .....	15	9
Malaria .....	1	2
Mastoiditis .....	1	0
Measles .....	7	5
Menorrhagia .....	1	3
Mitral Insufficiency .....	4	1
Mumps .....	7	9
Myalgia Traumatic .....	17	31
Nephritis Acute .....	4	0
Neuritis .....	5	7
Neuralgia:		
Face .....	19	29
Intercostal .....	11	5
Neurasthenia .....	19	9
No Disease .....	36	48
Orchitis .....	2	1
Otitis Media Acute .....	16	9
Osteomyelitis .....	1	0
Paronychia .....	5	12
Pediculosis Pupis .....	1	0
Physical Examinations .....	42	17
Pharyngitis .....	108	137
Pleurisy .....	9	2
Pneumonia .....	5	1
Polipi .....	1	3
Prostatitis .....	1	0
Prophylaxis Smallpox .....	45	13
Psoriasis .....	1	0
Phyorrhea Alvoaris .....	1	0
Redundant Foreskin .....	8	2
Refractive error .....	24	7
Rheumatism .....	9	4
Renal Calculi .....	2	0
Rhinitis Chronic .....	5	2
Scarlet Fever .....	5	2
Scabies .....	26	15
Sciatica .....	2	0



## CONDITIONS TREATED

	Semester	
	1st	2nd
Shock.....	6	6
Sinusitis.....	9	20
Sprain:		
Abdomen.....	2	0
Arm.....	3	1
Ankle.....	25	21
Back.....	2	7
Elbow.....	3	1
Finger.....	7	14
Foot.....	3	7
Groin.....	4	6
Hand.....	3	1
Hip.....	3	0
Knee.....	31	14
Leg(tendon achilles).....	7	22
Shoulder.....	11	12
Sacro Iliac Joint.....	2	0
Side.....	3	0
Thumb.....	4	11
Toe.....	2	5
Wrist.....	16	12
Synovitis Knee.....	6	2
Stomatitis.....	5	2
Sputum Examination.....	9	11
Smallpox.....	1	0
Tachycardia.....	1	2
Tinea Circinata.....	9	14
Tinea Sycosis.....	1	0
Tonsillitis Acute.....	74	59
Tonsillitis Chronic.....	15	8
Torticallas.....	7	5
Tracheitis.....	27	92
Tuberculosis lungs.....	1	1
Tuberculosis suspected.....	6	2
Ulcer:		
Mouth.....	9	14
Arm.....	3	1
Leg.....	5	2
Undiagnosed.....	40	79
Urinalysis.....	68	42
Urticaria.....	7	15
Varicocele.....	7	4
Varruca.....	22	37
Whooping cough.....	1	2
Wounds:		
Incised.....	150	93
Contused.....	55	40
Lacerated.....	10	18

Respectfully submitted,

H. SHINDLE WINGERT, M. D.,  
*Director of Student Health Service.*

## PHYSICAL EDUCATION

*President W. O. THOMPSON, Ohio State University.*

DEAR SIR: I have the honor to present to the President and Board of Trustees the annual report from the department of Physical Education for the year ending June 30, 1920.

The department activities include the following:

- 1 Required work in Physical Education
  - a. Men's Division
  - b. Women's Division.
- 2 Elective courses in Physical Education
- 3 Intramural Athletics
- 4 Intercollegiate Athletics.

The year 1919-1920 permitted the Department of Physical Education to return again to somewhat of a normal program. The student enrollment in all phases of the work of this department was far in excess of that which it has ever been before. The department, although handicapped from the standpoint of facilities and available working space, feels that the year, so far as work accomplished is concerned, was successful. Experience of the Army in Physical Education, including Athletics, has been a big stimulus to the general Physical Education program and the work met with a ready and enthusiastic response on the part of the student body.

## REQUIRED WORK

The required work for men was conducted with some additional features, for the most part as heretofore with additional work being offered in electives. The total registration numbered 1,802, which is an increase of approximately 1,000 over last semester's enrollment. The usual physical examination for every student was conducted, a report of which you will find attached. The department had assistance from the College of Medicine and the Homoeopathic College in making these examinations. The required work for men included the usual two periods per week.

Electives were also offered and were taken part in as follows:

Boxing .....	108
Wrestling .....	42
Track and Cross Country .....	111
Basketball .....	50
Baseball .....	57
Advanced Gymnastics .....	20
Tennis .....	160

The remainder of the enrollment was engaged in the regular gymnasium class work, made up of Formal Swedish gymnastics, class boxing and mass games.

There was also offered a course in teaching of Physical Education which was made up of men capable of doing some teaching and assisting in work in the department. This class numbered approximately 125.



An efficiency test was conducted in connection with the work of the department with satisfactory results. All men taking the work were divided into four classes and these qualifications resulted in the following tabulation:

Men in A class .....	28.0%
Men in B class .....	53.6%
Men in C class .....	14.6%
Men in D class .....	3.8%

These efficiency tests clearly show the need of a more comprehensive work in Physical Education, and were taken part in with a great deal of enthusiasm by the student body.

The work in swimming for men has been abandoned due to the crowded conditions and small pool available. The pool was filled up and twenty showers were installed which in a measure takes care of the need of ample bathing facilities.

In addition to the regular work of four periods per week for women, the Women's Athletic Association was particularly active in promoting Physical Education for Women and included in their program for the first time in the history of the University a successful Track and Field Meet. In spite of the crowded conditions work in the Women's Department was efficiently conducted.

A number of normal courses in Physical Education were offered throughout the year, and including the normal courses offered in the summer session, attracted an enrollment of 200.

#### INTRAMURAL

2,000 men and women took an active part in the intramural program which was offered during the year and the scope of the work in this division of Physical Education has been greatly enlarged.

The Intramural program included soccer football, basketball, baseball, tennis and a boxing and wrestling tournament. This tournament alone attracted 500 participants.

The annual indoor Intramural Festival conducted in the Gymnasium was the most successful event of its kind that has yet been held. The outdoor Intramural Track and Field Meet concluded the Intramural season.

The addition of an intramural director next year indicates the popularity of this branch of Physical Education.

We have merely scratched the surface so far as intramural work is concerned and are very optimistic about the future of this most important phase of Physical Education. Present intramural facilities greatly handicap a successful expansion of intramural work.

#### INTERCOLLEGIATE ATHLETICS

The Department of Intercollegiate Athletics returned to a somewhat normal basis and from the standpoint of enthusiasm and attendance exceeded any season up to this time. The showing of the University teams in intercol-

legiate competition was especially pleasing. The elimination of unfavorable conditions produced by the war generally and by the S. A. T. C. administration has made the year a successful one.

The adoption by the Faculty of a recommendation of this department for a more extensive scheme of Physical Education will give a great impetus to the work of this department. There is still a great need, however, for a Physical Education program which will reach the entire student body throughout their life at the University. The recognition given Physical Education throughout the nation as a real educational factor has placed it upon a plane with all other work offered in a well regulated educational curriculum. The problem of educators today is to turn out men and women ready to accept the responsibilities of citizenship and this needs to include training mentally, physically and morally. This is to be accomplished in part by physically educating boys and girls during the period of maturity and by encouraging in them physical activities essential to the continuation of health and bodily vigor.

To best serve the State this department should include in addition to the work already offered, an Extension Department under competent supervision which would help to meet the need of a State-wide Physical Education program. Fifteen of our States have already passed legislation making Physical Education compulsory among the secondary schools and colleges and such legislation is contemplated for our great State of Ohio. The Ohio State University needs to prepare and cooperate in a progressive and comprehensive Physical Education program which will best serve the State and the Nation.

Additional facilities so badly needed for our work to be carried on efficiently will be provided for by the improvement of the river front and the building of the Stadium. This great recreational center will give an opportunity for the offering of an exhaustive outdoor Physical Education program.

Respectfully submitted,

L. W. ST. JOHN.



## REPORT OF FRESHMEN PHYSICAL EXAMINATIONS

1919-1920

J. H. NICHOLS, M. D.

Total number examined . . . . .	1802	
	Number	Percent
Number receiving "A" classification . . . . .	471	26.1
Number eligible for efficiency test . . . . .	471	26.1
Number passing efficiency test . . . . .		
EYES		
Wearing glasses . . . . .	201	11.1
Defective sight, not wearing glasses . . . . .	355	19.1
EARS		
Defective hearing . . . . .	32	1.7
NOSE		
Deflected Septa . . . . .	463	25.6
Septal Spurs . . . . .	276	15.3
Hyp. Turbinates . . . . .	236	13.0
Polyps . . . . .	3	.16
THROAT		
Hypertrophied tonsils . . . . .	282	15.6
Tonsils removed . . . . .	175	9.7
Adenoids removed . . . . .	82	4.5
TEETH		
Decayed . . . . .	89	4.9
Filled . . . . .	1627	90.2
Perfect . . . . .	74	4.1
Pyorrhea . . . . .	12	.66
NECK		
Thyroid gland-hyperplasia . . . . .	22	1.2
LUNGS		
Rales . . . . .	3	.16
HEART		
Mitral regurgitation . . . . .	16	.88
Aortic regurgitation . . . . .	2	.11
Respiratory and Hemic murmurs . . . . .	17	.94
Dilated heart . . . . .		
Myocarditis . . . . .	2	.11
Neurotic . . . . .	27	1.49
GENITAL ORGANS		
Varicocele . . . . .	116	6.4
Hernia . . . . .	22	1.20
Hydrocele . . . . .	8	.44
Undescended testicle . . . . .	6	..
Removal of testicle . . . . .	3	.16
GENITAL URINARY		
Gonorrhea . . . . .	15	.83
Chancres . . . . .		..
Syphilis . . . . .		..

## ANNUAL REPORT

## URINE

Albumin in urine .....	79	4.3
Hyaline and granular casts .....	8	.44
Sugar .....		

## BLOOD PRESSURE

Over 150.....	90	4.9
Under 108 .....	3	.16

## INJURED IN SERVICE

Gassed .....	8	..
G. S. W.....	1	..
Shrapnel .....	16	..

## VACCINATION

Number referred for .....	270	15.00
Number vaccinated .....	1532	85.

MEN REFERRED FOR SPECIAL  
TREATMENT AND ADVICE

Referred to Dentist .....	62	3.4
Referred to Oculist .....	24	1.3
Referred for nose and throat .....	46	2.5
Referred for other operations.....	16	.88

## POSTURAL AND STRUCTURAL DEFECTS

Round shoulders .....	549	30.4
Right shoulder low .....	132	7.3
Left shoulder low .....	82	4.5
Head forward .....	545	30.2
Chest flat .....	38	2.1
Chest funnel .....	17	.94
Chest pigeon.....	7	.38
Scolosis .....	62	3.4
Kyhhosis .....	3	.16
Lordosis .....	85	5.2
Flat feet .....	177	6.4

## HEIGHT AND WEIGHT

Height below 5 ft. 4 in.....	39	2.1
Weight less than 120 lbs.....	214	11.8

## HABITS

Tobacco users .....	687	38.17
Cigarette smokers .....	409	59.5
Cigar smokers .....	72	10.4
Pipe smokers .....	167	24.3
Tobacco chewers .....	36	5.9

## SWIMMING

Able to swim .....	1301	72.1
Unable to swim.....	501	27.8

DISEASES OF FRESHMEN PREVIOUS TO  
ENTERING THE UNIVERSITY

Typhoid .....	198	10.9
Scarlet Fever .....	237	13.1
Small Pox .....	76	4.2
Diphtheria .....	142	7.8
Pneumonia .....	276	15.3
Mumps .....	1068	59.2
Measles.....	1453	80.6
Tonsilitis .....	504	26.8
Influenza .....	278	15.4



## INTELLIGENCE TESTS

*President W. O. THOMPSON, Ohio State University.*

DEAR SIR: The following information concerning intelligence tests may be of interest to the members of the University faculty, especially to the Administrative Officers of the faculty including the Entrance Board:

## WHAT THE RESULTS HAVE SHOWN

1. The cold statistics are given in the enclosed reprint from "School and Society". Any data which the President may want can be obtained from the enclosures.
2. That the psychological tests are more reliable in estimating student ability than any subjective test including estimates based on classroom work and the usual academic examinations.
3. That the results of the tests can be used to great advantage in the following administrative questions:
  - a. In determining the amount of work which certain students should be permitted to carry.
  - b. In determining the amount of outside work which certain students should be permitted to assume.
  - c. In helping to decide the question of dismissal or suspension of any student.
  - d. In determining the reinstatement of suspended students.
  - e. In solving the problems connected with probationary and morally delinquent students.
  - f. In all disciplinary cases.
  - g. The results should assist instructors in determining admission to certain advanced courses, in which innate ability is as important a requirement as any fixed academic prerequisite.
4. Our investigation of the failures of students, who, according to their intelligence ratings, are class I or II students, shows very conclusively that these failures are *not due to lack of ability*. We have, in the tests, a very definite line of administrative procedure in the case of such students. The "squeak" is, therefore, not a question of ability and the "oil" should be put elsewhere.  
(Note: Students who fall in class I and II class make up the best 25% of the student body).
5. Our investigation of the failures of students who fall into class V shows that failure here is due to lack of capacity or ability to do University work. Our conclusions here are not as conclusive as in "4" above. Different standards of requirements on the part of different instructors will readily suggest itself. Here, as in the cases described under "4", we possess a very definite line of administrative procedure.
6. Columbia University has demonstrated the validity of psychological tests as an entrance requirement. Students who can not satisfy the conventional entrance requirement should be admitted as regular students, provided they make class I or class II grade on the tests. This would simplify the problem of the special student and give young men and women of superior native ability an opportunity. In our opinion the psychological tests should be used at Ohio State as an entrance requirement for students who can not satisfy the conventional entrance requirements.
7. According to faculty action the principles of classifying students for instructional purposes into groups of approximately equal ability "was agreed to". It is suggested that this principle be tried out in one or two departments to

demonstrate its worth as an educational procedure. The extension of the principle would depend upon the results of the experiment as tried in the department or departments as suggested above.

8. Intelligence ratings should always be considered in giving vocational advice to students, and in recommendations for academic and industrial positions. Native capacity is far more important in prognosticating future success than academic acquirement. Both should be considered.

## MENTAL TESTS IN RELATION TO EDUCATIONAL

### ADVICE AND DIRECTION

At the present time there is no agency in the University to which a student may turn for educational advice and direction. A freshman arrives on the campus and is left to his own device in working out his life's salvation. The great bulk of the entering men and women are at sea concerning the chief callings in modern life. Their plans are vague and they little understand the variety of opportunities which a great University offers, much less do they understand their interests, aptitudes and native bent. As a result there is much shifting from college to college, from department to department and from course to course. Many of them find themselves only toward the close of their university life when it is too late. Complaints and wails of this character have come to us over and over again. If many such cases come under our observation, limited as it is, what must be the aggregate sum of such cases?

We know far too little concerning each student's history prior to his entrance into the University. We should have a large amount of biographical material concerning each student shortly after his arrival. This material should be obtained through correspondence with the parents and school teachers, through personal interviews, etc. In the case of every freshman we should have information as to his capabilities, tastes, mental peculiarities, deficiencies previous successes or failures in scholarship, character, athletic sports, student activities, etc. In short we should have as much information as is possible to obtain for each entering student. Then only can the University do its full duty and then only will a student economically expend his time and profit maximally; then only can he be fitted best into the niche for which he is by native inclination and previous training fitted.

With this information, a Committee on Educational Advice and Direction could intelligently advise a student regarding the degree for which he should enter, choice of elective studies and the conduct of his personal life.

Later on in his course, say at the end of his sophomore year, he could be informed regarding the most important callings in modern life and be directed to concentrate on the proper subjects in the junior and senior years so as to best fit him for his life's work.

Obviously the role which intelligency tests play here is very important. It is not only a matter of degree or normal mentality, but mental peculiarities, emotional disturbances, delayed adolescence, mild obsessions, mental hygiene, abnormal fears, etc.

### ADDITIONAL INFORMATION

The following information may be of interest with reference to the application of psychological tests in higher institutions:

1. As a result of an inquiry which the Department of Psychology made we find 31 Universities making use of intelligence tests of greater or limited extent.



2. Among the uses which have been actually made by one or more of the above Universities are the following:
- a. For correlation and other educational investigations
  - b. Supplementary for entrance requirements.
  - c. As a basis for educational advice
  - d. As a basis for vocational guidance
  - e. In dealing with delinquent and probationary students
  - f. Admission of students to certain advanced courses
  - g. By scholarship committees.
  - h. In the interpretation of academic grades
  - i. In classifying groups for instructional purposes.
3. The above institutions also reported that they believed the proper functions of psychological tests in colleges and universities to be as follows below: What is listed below is an addition to the list of actual uses now being made of the tests as given in "2" above.
- a. To determine hours of work, selection of courses, etc.
  - b. For diagnostic and general advisory purposes.

In the above we have selected only what we thought might be of use to the President and Faculty. We have a large amount of data covering individual investigations of failures connected with students who were classified as "very superior" as well as a large amount of data connected with students of "average" or less ability who made excellent grades. Should the President or Faculty desire a resume of this material we would be very glad to submit it upon request.

Respectfully submitted,

GEORGE F. ARPS,  
*Chairman.*

SUMMARY OF THE FINANCIAL STATEMENT  
FOR THE YEAR ENDING JUNE 30, 1920.

(A complete detailed financial report for the fiscal year ended June 30, 1920, is printed in separate form and may be had upon application.)

The financial statement presented herein is that part of the Annual Report of the Board of Trustees to the Governor of Ohio, which shows the financial condition of The Ohio State University for the fiscal year ended June 30, 1920.

CARL E. STEEB

*Secretary*

CONSOLIDATED STATEMENT  
INCOME AND EXPENDITURES

DESCRIPTION	Items	Total
Cash Balance July 1, 1919 .....		\$ 106,904.67
Cash Balance, Students' Army Training Corps .....		11,765.84
Total Income for year, <i>Schedule B</i> .....	\$ 2,653,711.21	
Less funds paid to State Treasurer and not available for the University .....	131,074.17	
Total available Income, <i>Schedule B</i> .....	\$ 2,522,637.04	
Total Expenditures for year, <i>Schedule C</i> .....	2,388,008.14	
Balance for year .....		134,628.90
Cash Balance June 30, 1920 <i>Schedule D</i> .....		\$ 253,299.41

ASSETS AND LIABILITIES

DESCRIPTION	Items	Total
Current Assets June 30, 1920, <i>Schedules D and F</i> .....	\$ 893,703.55	
Investment Assets June 30, 1920, <i>Schedules D and F</i> .....	1,046,466.09	
Educational Plant— Value of lands, buildings and equipment, <i>Schedules D and F</i> .....	7,122,029.72	
Current Liabilities at end of year, <i>Schedule F</i> .....		\$ 489,928.21
Investment Liabilities at end of year, <i>Schedule F</i> .....		1,046,466.09
Capital Account, <i>Schedule F</i> .....		7,525,805.06
Totals .....	\$ 9,062,199.36	\$ 9,062,199.36



## INCOME

## Schedule B

DESCRIPTION	Items	Total
<b>INCOME FROM STUDENTS:</b>		
Tuition, incidental and laboratory fees, <i>Schedule B-1</i> . . .	\$ 208,424.50	
Special fees, degrees, etc . . . . .	5,028.75	
For supplies, chemicals, laboratory material, etc. (included in Warehouse) . . . . .		
For Shop Deposits . . . . .	5,128.80	
For Locker Rent . . . . .	5,141.00	
For Dormitories—Oxley Hall, <i>Schedule J</i> . . . . .	30,785.70	\$ 254,508.75
<b>INCOME FROM INVESTMENT OF:</b>		
Endowments for general purposes (see below) . . . . .		
Endowments for designated purposes (see below) . . . . .		
Other investments . . . . .		
<b>INCOME FROM GRANTS BY NATION, STATE AND SPECIAL TAXATION:</b>		
<b>State Aid:</b>		
Income from endowments for general purposes, <i>Schedule G</i> . . . . .	\$ 13,045.88	
Income from endowments for designated purposes, <i>Schedule H</i> . . . . .	4,341.71	
Appropriation by State Legislature . . . . .	1,716,495.31	1,734,882.90
<b>Federal Aid:</b>		
Income from Land Grant Act of July 2, 1862, (paid by State), <i>Schedule G</i> . . . . .	31,450.60	
Income from other Land Grants—Virginia Military Lands (paid by State), <i>Schedule G</i> . . . . .	13,517.32	
Additional Aid Acts of Aug. 30, 1890, and March 4, 1907 . . . . .	50,000.00	
For Agricultural Extension Work (acts of May 8, 1914, and July 24, 1919) . . . . .	184,536.95	279,504.87
<b>GIFTS FOR CURRENT EXPENSES:</b>		
For designated purposes, <i>Schedule B-3</i> . . . . .	2,065.00	2,065.00
<b>INCOME FROM OTHER SOURCES:</b>		
Architecture-Photo . . . . .	\$ 127.65	
Boys' and Girls' Club Work:		
Farmers' Week Trip . . . . .	5,317.29	
Funds from Counties . . . . .	625.00	
County Agents' funds from counties . . . . .	94,374.05	
Dental Clinic . . . . .	9,075.91	
Farm Bureau Funds . . . . .	2,034.88	
Farmers' Institute funds from counties . . . . .	16,450.00	
Homoeopathic Clinic . . . . .	29,874.91	
Journalism-Printing . . . . .	26,383.70	
Laundry . . . . .	439.70	
Miscellaneous Sales . . . . .	1,568.18	
Rent—Buildings and Grounds . . . . .	330.00	
Sales—Produce and Dairy Products . . . . .	11,513.24	
State Board of Education (Smith-Hughes) . . . . .	30,895.67	
Veterinary Clinic . . . . .	7,182.52	
Virginia Military Lands . . . . .	2.00	236,194.70
<b>TEMPORARY ACCOUNTS:</b>		
Warehouse . . . . .	\$ 146,554.99	\$ 146,554.99
Total income, <i>Schedule A</i> . . . . .		2,653,711.21
Less funds paid to State Treasurer and not available for University, <i>Schedules A and B-2</i> . . . . .		131,074.17
Total available income, <i>Schedule A</i> . . . . .		\$ 2,522,637.04

## CLASSIFIED EXPENDITURES

Schedule C

DESCRIPTION	Items	Total
<b>EXPENSES:</b>		
Salaries .....	\$1,562,886 82	
Advertising .....	676 92	
Boys' and Girls' Club Work .....	6,339 64	
Coal and Gas .....	78,724 79	
Dormitory Supplies .....	13,114 55	
*Employees and extra labor .....	82,487 24	
Feed for live stock .....	11,281 67	
Field Work—Agriculture Extension—including County Agents .....	87,944 93	
Freight and cartage .....	6,259 59	
Hospitals—use of wards and heating .....	11,137 50	
Incidentals .....	15,114 06	
Laboratory and educational supplies .....	44,797 12	
Materials and general supplies .....	107,618 09	
Printing .....	20,884 32	
Refunds .....	832 75	
Repairs to equipment .....	11,152 03	
Scholarships and student aid .....	5,286 25	
Stationery and office supplies (including postage) .....	25,939 19	
Telephone and telegraph .....	9,494 85	
Traveling expenses .....	5,158 99	
Trustees' expense .....	903 47	
Virginia Military Lands .....	12 75	
Water .....	10,477 70	
Total Expenses, Schedules C-1 and C-2 .....		\$2,118,525 22
<b>EQUIPMENT:</b>		
Apparatus .....	\$ 17,801 27	
Books .....	17,240 43	
Collections .....	11 25	
Furniture and fixtures .....	15,228 78	
Horses, wagons and harness .....	674 10	
Live stock .....	2,365 40	
Machinery, tools and implements .....	20,903 78	
Total Equipment, Schedules C-1 and C-3 .....		74,225 01
LANDS .....	9,804 90	
NEW BUILDINGS .....	3,307 43	
GRADING, ROADS, WALKS, ETC. ....	19,857 15	
UNCOMPLETED EQUIPMENT AND IMPROVEMENT ACCOUNTS .....	20,820 75	
Total, Schedules C-1 and C-4 .....		53,790 23
<b>TEMPORARY ACCOUNT:</b>		
Warehouse .....		141,467 68
Total Expenditures, Schedules A and C-1 .....		\$2,388,008 14

\* Amount paid to students, \$25,336.87



## OHIO STATE UNIVERSITY

159

BALANCE SHEET JUNE 30, 1920.

Schedule F

## ASSETS

DESCRIPTION	Items	Total
<b>CURRENT ASSETS:</b>		
Cash in bank and on hand for current expenses.....	\$ 253,299.41	
Deposits .....	454.00	
Auditor of State—Special Appropriations .....	489,928.21	
Store Room (Supplies per Inventory) .....	150,321.93	
Total Current Assets .....		\$ 893,703.55
<b>INVESTMENT ASSETS:</b>		
Securities, State Treasurer (irreducible debt of State)...	1,045,466.09	
U. S. Government Bond .....	1,000.00	
Total Investment Assets .....		1,046,466.09
<b>EDUCATIONAL PLANT: LANDS, BUILDINGS AND EQUIPMENT:</b>		
Balance at beginning of year .....	7,007,488.96	
Additions during year .....	114,540.76	
Total Educational Plant .....		7,122,029.72
Total Assets .....		\$9,062,199.36

## LIABILITIES

DESCRIPTION	Items	Total
<b>CONTINGENT LIABILITIES:</b>		
Special State Appropriations .....	\$ 489,928.21	
Total Contingent Liabilities .....		\$ 489,928.21
<b>ENDOWMENT FUNDS:</b>		
Endowment Capital Accounts:		
Funds for General Purposes .....	966,896.67	
Funds for Designated Purposes .....	79,569.42	
Total Liabilities Endowment Funds .....		1,046,466.09
<b>EDUCATIONAL PLANT, DEBT AND CAPITAL ACCOUNT:</b>		
Capital Account .....	7,525,805.06	
Total Educational Plant .....		7,525,805.06
Total Liabilities .....		\$9,062,199.36

## GIFTS FOR GENERAL AND DESIGNATED PURPOSES

The following items are turned into the State Treasury to the credit of Rotary funds for use by the University:

NAME AND DESCRIPTION	Amount
S. A. Norton .....	\$ 25.00
A gift on September 11, 1919, to pay for the completion of the publishing of a set of books presented to the University by Professor S. A. Norton.	
Charles F. Kettering .....	1,000.00
A gift on April 24, 1920, to be used for research work in the College of Homoeopathic Medicine.	
Class of 1920 .....	1,040.00
A gift on June 16, 1920, to be used for installing strikers on the Chimes.	
Total Schedule B .....	\$ 2,065.00

## APPENDIX I

## BOARD OF TRUSTEES

	Date Original Appointment	Term Expires
JOHN F. CUNNINGHAM, Cleveland .....	Dec. 22, 1914	May 13, 1921
JOHN KAISER, Marietta .....	Feb. 25, 1915	May 13, 1922
C. F. KETTERING, Dayton .....	Mar. 21, 1917	May 13, 1923
GUY W. MALLON, Cincinnati .....	May 11, 1903	May 13, 1924
O. E. BRADFUTE, Cedarville .....	Aug. 21, 1905	May 13, 1925
T. C. MENDENHALL, Ravenna .....	June 16, 1919	May 13, 1926
BENJAMIN F. McCANN, Dayton .....	May 13, 1913	May 13, 1927

## OFFICERS OF THE BOARD

JOHN F. CUNNINGHAM .....	Chairman
JOHN KAISER .....	Vice-Chairman
CARL E. STEEB .....	Secretary and Business Manager
JULIUS F. STONE .....	Treasurer

## APPENDIX II

## ADMINISTRATIVE OFFICERS

For the year ending June 30, 1920

WILLIAM OXLEY THOMPSON, D. D., LL. D. ....	<i>President</i>
Office—University Hall, 99312; N. 476	
Residence—University Grounds, 2056	
CARL E. STEEB, B. Ph. ....	<i>Secretary of the Board of Trustees and Business Manager</i>
Office—University Hall (East End), 99332; N. 32	
Residence—1956 Iuka Avenue, 5835	
EDITH D. COCKINS, B. A. ....	<i>Registrar, University Editor and Secretary of the Faculty</i>
Office—101 University Hall, 99314	
Residence—1348 Neil Avenue, 16310	
LESTER E. WOLFE, M. A. ....	<i>Secretary of the Entrance Board</i>
Office—107 University Hall, 99353; N. 939	
Residence—1491 Neil Avenue, 16507	
ELISABETH CONRAD, M. A., Ph. D. ....	<i>Dean of Women</i>
Office—201 Home Economics Building, 99367	
Residence—1981 Indianola Avenue, 11252	
KATHERINE A. VOGEL .....	<i>Executive Clerk</i>
Office—University Hall, 99312; N. 476	
Residence—209 South Monroe Avenue, E. 2356	



- RAY M. ROYER ..... *Purchasing Agent*  
Office—University Hall (East End), 99374; N. 3222  
Residence—1828 Arlington Avenue, H. 3184
- FRED E. JONES ..... *Director of Stores and Receiving Department*  
Office—Stores and Receiving Department, 99354; N. 3813  
Residence—255 Oakland Park Avenue, N. 7246
- CHARLES A. KUNTZ ..... *Comptroller*  
Office—University Hall (East End), 99332; N. 32  
Residence—2087 Peasley Street, N. 5118
- FLORIS D. HANE ..... *Acting Cashier*  
Office—University Hall (East End), 99332; N. 32  
Residence—1755 North Fourth Street, 11954
- WILLIAM C. McCracken ..... *Superintendent of Operation and Maintenance*  
Office—Service Building, 99311; N. 718  
Residence—8 West Woodruff Avenue, 11823
- JOSEPH N. BRADFORD, M. E. .... *University Architect*  
Office—Brown Hall, 99361  
Residence—55 East Oakland Avenue, 14844
- JOSEPHINE MATTHEWS, B. Sc. (Dom. Sci.) .. *House Superintendent—Oxley Hall*  
Office and Residence—Oxley Hall, 99352; N. 4146
- EDWARD S. DRAKE ..... *Manager of Ohio Union*  
Office and Residence—Ohio Union, 99357; N. 1002  
Manager's private phone 99359-2 R.

## APPENDIX III

Which shows the number of professors, officers, teachers, and other employees, and the position and compensation of each, as required by Section 7947 of an act passed May 29, 1915.

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
William Oxley Thompson	President	\$10,000.00
Alfred Vivian	Dean of the College of Agriculture	4,800.00
*Harold Alberry	Student Assistant in the College of Agriculture	30.00
J. F. Lyman	Professor in Agricultural Chemistry and Soils	3,000.00
Firman E. Bear	Professor in Agricultural Chemistry and Soils	3,000.00
T. G. Phillips	Assistant Professor in Agricultural Chemistry and Soils	2,175.00
Geo. M. McClure	Instructor in Agricultural Chemistry and Soils	1,875.00
Guy W. Conrey	Instructor in Agricultural Chemistry and Soils	1,550.00
Rachel Edgar	Assistant in Agricultural Chemistry and Soils	900.00
Charles L. Thrash	Assistant in Agricultural Chemistry and Soils	900.00
Sidney W. Bliss	Assistant in Agricultural Chemistry and Soils	600.00

\*Part time.

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
Emory F. Almy .....	Assistant in Agricultural Chemistry and Soils .....	\$ 600.00
James R. Shepherd .....	Assistant in Agricultural Chemistry and Soils .....	1,200.00
T. G. Watson .....	Instructor in Agricultural Chemistry and Soils .....	1,745.00
W. F. Stewart .....	Professor in Agricultural Education...	2,250.00
*H. C. Ramsower .....	Professor in Agricultural Engineering	1,100.00
F. W. Ives .....	Professor in Agricultural Engineering	2,825.00
G. W. McCuen .....	Professor in Agricultural Engineering	2,803.33
P. B. Potter .....	Assistant Professor in Agricultural Engineering .....	2,475.00
J. T. Miller .....	Mechanic in Agricultural Engineering..	1,083.31
*J. B. Green .....	Assistant Professor in Agricultural Engineering .....	1,250.00
*David S. Weaver .....	Student Assistant in Agricultural Engineering .....	125.00
*E. A. Silver .....	Student Assistant in Agricultural Engineering .....	150.00
C. S. Plumb .....	Professor of Animal Husbandry.....	3,500.00
D. J. Kays .....	Professor of Animal Husbandry.....	2,930.00
J. S. Coffey .....	Professor of Animal Husbandry.....	2,750.00
F. S. Jacoby .....	Professor of Animal Husbandry.....	2,930.00
C. T. Conklin .....	Assistant Professor of Animal Husbandry .....	2,400.00
D. M. Fyffe .....	Superintendent of Live Stock .....	1,575.00
E. N. Transeau .....	Professor and Head of Botany.....	3,000.00
J. H. Schaffner .....	Professor of Botany .....	2,750.00
*R. F. Griggs .....	Assistant Professor of Botany .....	750.00
H. C. Sampson .....	Assistant Professor of Botany .....	2,450.00
Freda Detmers .....	Instructor in Botany .....	1,500.00
A. E. Waller .....	Instructor in Botany .....	1,900.00
John S. Crabb .....	Assistant (Greenhouse) .....	1,058.31
*J. D. Sayre .....	Assistant in Botany .....	780.00
Eunice P. Root .....	Graduate Assistant in Botany .....	300.00
*Donovan Church .....	Graduate Assistant in Botany .....	150.00
Mary E. Wurdack .....	Student Assistant in Botany .....	200.00
Donald B. Anderson .....	Student Assistant in Botany .....	200.00
*Ernest L. Stover .....	Assistant in Botany .....	360.00
*Raymond A. Dobbins .....	Laboratory Assistant in Botany .....	150.00
*Lewis H. Tiffany .....	Instructor in Botany .....	100.00
Oscar Erf .....	Professor of Dairying .....	3,000.00
R. B. Stoltz .....	Assistant Professor of Dairying .....	2,475.00
*Arthur DeVries Burke .....	Instructor of Dairying .....	1,312.50
*Don S. Kochheiser .....	Assistant—Dairy Mfg. .....	1,100.00
J. B. Park .....	Professor in Farm Crops .....	3,000.00
C. J. Willard .....	Assistant Professor in Farm Crops .....	1,950.00
D. N. Lutz .....	Instructor in Farm Crops .....	1,575.00
S. J. Green .....	Assistant in Farm Crops .....	985.00
W. Corwin .....	Assistant in Farm Crops .....	600.00
A. E. Smith .....	Farm Foreman in Farm Operation...	1,670.00
*Edna N. White .....	Professor in Home Economics .....	1,125.00
Anna Van Meter .....	Professor in Home Economics .....	2,500.00
*Maude G. Hathaway .....	Assistant Professor in Home Economics	850.00

\*Part time.



<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
Grace G. Walker.....	Assistant Professor in Home Economics	\$1,900.00
Maude G. Adams.....	Assistant Professor in Home Economics	1,600.00
*Lila Skinner.....	Instructor in Home Economics.....	1,225.00
Grace Linder.....	Instructor in Home Economics.....	850.00
*Mrs. Louise S. Hengst.....	Instructor in Home Economics.....	60.00
Josephine Hamblin.....	Instructor in Home Economics.....	1,200.00
Elsie Steiger.....	Assistant in Home Economics.....	750.00
Edna Elliott.....	Maid—Department of Home Economics	650.00
*Louise Wood.....	Instructor in Home Economics.....	108 32
Lelia McGuire.....	Instructor in Home Economics.....	1,350.00
Adelaide Barer.....	Assistant in Home Economics.....	800.00
Alice Donnelly.....	Instructor in Home Economics.....	1,500.00
*Elizabeth Baines.....	Instructor in Home Economics.....	1,050.00
K. Louise Boyenton.....	Assistant in Home Economics.....	750.00
*Rosetta Harpster.....	Assistant in Home Economics.....	375.00
*Catherine Metzler.....	Instructor in Home Economics.....	129.86
*Mrs. Dorothy L. Ronan....	Instructor in Home Economics.....	580.48
W. Paddock.....	Professor of Horticulture and Forestry	3,250.00
L. M. Montgomery.....	Professor of Horticulture and Forestry	2,550.00
N. W. Scherer.....	Assistant Professor of Horticulture and Forestry.....	1,500.00
A. C. Hottes.....	Assistant Professor of Horticulture and Forestry.....	2,200.00
P. H. Elwood.....	Assistant Professor of Horticulture and Forestry.....	2,200.00
F. G. Charles.....	Instructor in Horticulture and Forestry	1,625.00
P. E. Embler.....	Assistant in Horticulture and Forestry	1,395.00
J. E. Shanck.....	Assistant in Horticulture and Forestry	1,105.00
F. H. Kreckler.....	Acting Director—Lake Laboratory....	350.00
S. R. Williams.....	Instructor in Zoology.....	250.00
M. E. Stickney.....	Instructor in Botany.....	250.00
Edna Mosher.....	Instructor in Entomology.....	250.00
J. I. Falconer.....	Professor in Rural Economics.....	2,600.00
D. D. Hughes.....	Assistant Professor in Rural Economics	1,900.00
H. E. Erdman.....	Assistant Professor in Rural Economics	2,500.00
*L. O. Lantis.....	Assistant Professor in Rural Economics	1,183.33
*Francis L. Morrison.....	Assistant in Rural Economics.....	300.00
R. L. Donley.....	Instructor—Winter Course.....	300.00
John Lengacher.....	Instructor—Winter Course.....	300.00
Archie Bishop.....	Instructor—Winter Course.....	400.00
E. J. Walter.....	Instructor—Winter Course.....	300.00
Raymond C. Osburn.....	Professor and Head of Zoology and En- tomology.....	3,250.00
Herbert Osborn.....	Research Professor of Zoology and En- tomology.....	3,500.00
James S. Hine.....	Associate Professor of Zoology and En- tomology.....	2,100.00
W. M. Barrows.....	Assistant Professor of Zoology.....	2,200.00
C. L. Metcalf.....	Professor of Entomology.....	2,500.00
F. H. Kreckler.....	Assistant Professor of Zoology.....	2,200.00
W. J. Kostir.....	Instructor of Zoology and Entomology..	1,500.00
Clarence Kennedy.....	Instructor of Zoology and Entomology..	1,550.00

\*Part time.

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
*Walter Balduf .....	Graduate Assistant in Zoology and Entomology .....	\$ 150.00
Walter Kraatz .....	Assistant in Zoology and Entomology ..	600.00
*Claiborne Young .....	Graduate Assistant in Zoology and Entomology .....	150.00
Anna Harshman .....	Graduate Assistant in Zoology and Entomology .....	450.00
Edwin Hartley .....	Assistant in Zoology and Entomology ..	450.00
Edward L. Wickliff .....	Instructor in Zoology and Entomology..	1,250.00
J. V. Denney .....	Dean of the College of Arts, Philosophy and Science .....	4,000.00
*Louis Foley .....	Secretary to the Dean of the College of Arts .....	300.00
H. C. Hockett .....	Professor of American History .....	2,000.00
Chauncey Boucher .....	Assistant Professor of American History .....	2,500.00
G. A. Wood .....	Instructor in American History .....	1,650.00
Carl Wittke .....	Instructor in American History .....	1,650.00
Eugene R. Roseboom .....	Instructor in American History .....	1,200.00
J. R. Taylor .....	Professor of English .....	3,000.00
G. H. McKnight .....	Professor of English .....	3,000.00
W. L. Graves .....	Professor of English .....	2,725.00
V. A. Ketcham .....	Professor of English .....	2,725.00
L. A. Cooper .....	Assistant Professor of English .....	2,475.00
E. L. Beck .....	Assistant Professor of English .....	2,475.00
C. E. Andrews .....	Assistant Professor of English .....	2,250.00
M. Percival .....	Assistant Professor of English .....	2,125.00
J. F. Craig .....	Instructor in English .....	1,770.00
E. W. Wiley .....	Instructor in English .....	1,870.00
Verona M. Dollinger .....	Instructor in English .....	1,330.00
Edith Sniffen .....	Instructor in English .....	1,330.00
E. A. Esper .....	Instructor in English .....	1,230.00
Walter French .....	Instructor in English .....	1,230.00
*Lenore McAdams .....	Graduate Assistant in English .....	150.00
John W. Tait .....	Instructor in English .....	1,250.00
Gladys Ninegar .....	Assistant in English .....	622.20
W. H. Siebert .....	Professor and Head of European History .....	3,500.00
E. H. McNeal .....	Professor of European History .....	3,000.00
Clarence Perkins .....	Professor of European History .....	2,500.00
Geo. A. Washburne .....	Assistant Professor of European History .....	2,125.00
John R. Knipping .....	Assistant Professor of European History .....	2,000.00
J. A. Bownocker .....	Professor of Geology .....	2,875.00
J. E. Carman .....	Professor of Historical Geology .....	2,800.00
T. M. Hills .....	Assistant Professor of Geology .....	2,325.00
W. M. Tucker .....	Assistant Professor of Geology .....	2,300.00
*Arthur Bevan .....	Instructor in Geology .....	90.00
Helen Morningstar .....	Instructor in Geology .....	1,350.00
Raymond E. Lamborn .....	Instructor in Geology .....	1,710.00
*Ruth Shover .....	Assistant in Geology .....	45.00
*Edna Vollrath .....	Assistant in Geology .....	45.00
M. B. Evans .....	Professor of German .....	3,500.00

\*Part time.



<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
B. A. Sisenlohr .....	Professor of German .....	\$2,375.00
May Thomas .....	Assistant Professor of German .....	1,650.00
R. O. Busey .....	Assistant Professor of German .....	1,500.00
T. F. Kotz .....	Instructor of German .....	1,400.00
*Walter French .....	Instructor of German .....	100.00
Geo. M. Bolling .....	Professor of Greek .....	3,500.00
S. C. Derby .....	Professor of Latin .....	2,875.00
A. W. Hodgman .....	Professor of Latin .....	3,000.00
W. S. Elden .....	Professor of Latin .....	3,000.00
*Reuben V. Smith .....	Instructor of Latin .....	700.00
J. A. Leighton .....	Professor of Philosophy .....	3,500.00
A. R. Chandler .....	Assistant Professor of Philosophy .....	1,900.00
A. E. Evey .....	Assistant Professor of Philosophy .....	1,500.00
R. D. Williams .....	Assistant Professor of Philosophy .....	1,900.00
Henry R. Spencer .....	Professor of Political Science .....	3,250.00
F. W. Coker .....	Professor of Political Science .....	3,000.00
*James Pollard .....	Assistant in Political Science .....	300.00
*Karl Finn .....	Assistant in Political Science .....	360.00
B. L. Bowen .....	Professor of Romance Languages .....	3,500.00
E. S. Ingraham .....	Professor of Romance Languages .....	2,975.00
T. E. Hamilton .....	Assistant Professor of Romance Languages .....	1,900.00
G. E. Havens .....	Assistant Professor of Romance Languages .....	1,900.00
E. F. Hacker .....	Assistant Professor of Romance Languages .....	1,900.00
Santiago Gutierrez .....	Assistant Professor of Romance Languages .....	1,800.00
E. S. Berthemey .....	Instructor of Romance Languages .....	1,300.00
Henri Tailliant .....	Instructor of Romance Languages .....	1,550.00
Homer C. Haddox .....	Instructor of Romance Languages .....	1,200.00
R. C. Williams .....	Assistant Professor of Romance Languages .....	1,800.00
Florence Hier .....	Instructor of Romance Languages .....	1,500.00
Gildo Masso .....	Instructor of Romance Languages .....	1,250.00
Arthur St. C. Sloan .....	Instructor of Romance Languages .....	1,550.00
Wm. F. Smith .....	Instructor of Romance Languages .....	1,500.00
Robert E. Rockwood .....	Assistant Professor of Romance Languages .....	2,250.00
Alexander P. Moore .....	Instructor of Romance Languages .....	1,600.00
Agnes E. Brown .....	Instructor of Romance Languages .....	1,500.00
Elizabeth Conrad .....	Assistant Professor of Romance Languages .....	
J. E. Hagerty .....	Dean of the College of Commerce and Journalism .....	4,000.00
M. B. Hammond .....	Professor of Economics and Sociology .....	4,000.00
C. C. Huntington .....	Professor of Economics and Sociology .....	3,000.00
*Geo. W. Eckelberry .....	Instructor of Economics and Sociology .....	1,000.0
C. O. Ruggles .....	Professor of Economics and Sociology .....	4,000.00
C. C. North .....	Professor of Economics and Sociology .....	2,750.00
H. F. Walradt .....	Assistant Professor of Economics and Sociology .....	2,625.00
Mary Louise Mark .....	Assistant Professor of Economics and Sociology .....	2,200.00

\*Part time.

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
*R. D. McKenzie	Assistant Professor of Economics and Sociology	\$ 360.00
*H. E. Bice	Instructor of Economics and Sociology..	800.00
Felix E. Held	Instructor of Economics and Sociology..	1,700.00
W. F. Gettys	Instructor of Economics and Sociology..	1,450.00
Orton W. Boyd	Assistant in Economics and Sociology..	1,000.00
Christian Van Riper	Assistant in Economics and Sociology..	1,000.00
*Goldin Dagger	Assistant in Economics and Sociology..	200.00
Edwin F. Clarke	Instructor of Economics and Sociology..	2,050.00
W. D. Wall	Lecturer in Economics and Sociology..	1,000.00
*C. D. Bohannon	Instructor in Economics and Sociology..	240.00
Charles A. Dice	Assistant Professor of Economics and Sociology	3,000.00
Agnes Drury	Assistant in Economics and Sociology..	700.00
Edward S. Stimson	Assistant in Economics and Sociology..	450.00
Forest L. Blanchard	Instructor in Economics and Sociology..	1,200.00
Montgomery Pike	Lecturer in Economics and Sociology..	800.00
Elizabeth Mitchell	Student Assistant in Economics and Sociology	150.00
*Clarence Klinger	Assistant in Economics and Sociology..	22.20
*Frederick E. Croxton	Assistant in Economics and Sociology..	200.00
*Henry J. Miller	Assistant in Economics and Sociology..	100.00
*H. F. Vanderlip	Assistant in Economics and Sociology..	380.00
*W. D. Walter	Assistant in Economics and Sociology..	200.00
*W. J. Blackburn	Assistant in Economics and Sociology..	200.00
*P. G. Eckelberry	Assistant in Economics and Sociology..	160.00
*W. H. Gysan	Assistant in Economics and Sociology..	400.00
J. S. Myers	Professor of Journalism	4,000.00
O. C. Hooper	Professor of Journalism	3,000.00
Paul C. Carty	Instructor of Journalism	2,283.31
M. H. Hallett	Instructor of Journalism	1,823.15
Albert P. Taylor	Instructor of Journalism	1,510.00
J. M. Semans	Dean and Professor of the College of Dentistry	4,000.00
H. V. Cottrell	Professor of Dentistry	1,350.00
Wm. C. Graham	Assistant Professor of Dentistry	930.00
R. B. Wiltberger	Assistant Professor of Dentistry	830.00
H. S. Shumway	Instructor in Dentistry	1,050.00
Clyde H. Hobbie	Assistant Professor of Dentistry	1,350.00
C. W. Strosnider	Assistant Superintendent of Dentistry..	1,050.00
O. O. Mobberly	Superintendent of Laboratories in Dentistry	1,875.00
Dick P. Snyder	Instructor in Dentistry	1,000.00
E. W. Martindale	Instructor in Dentistry	800.00
Frank C. Starr	Instructor in Dentistry	830.00
Irwin A. Bottenhorn	Instructor in Dentistry	830.00
Earl G. Jones	Instructor in Dentistry	600.00
Louis E. Reif	Instructor in Dentistry	550.00
Webster M. Baker	Student Assistant in Dentistry	100.00
George W. Knight	Dean of the College of Education	4,000.00
Charles F. Kelley	Professor and Head of Art	2,875.00
Alice R. Robinson	Assistant Professor of Art	1,500.00
W. J. Norris	Instructor in Art	1,650.00

\*Part time.



<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
Cora F. Baun .....	Instructor in Art .....	\$1,500.00
Melville R. Webber .....	Instructor in Art .....	1,200.00
Alma Knauber .....	Instructor in Art .....	1,500.00
L. F. Anderson .....	Professor of History and Philosophy of Education .....	3,500.00
*Helen Marshall .....	Assistant in History and Philosophy of Education .....	375.00
*Eldon L. Usry .....	Professor of Industrial Education.....	1,800.00
Robert E. Smith .....	Instructor of Industrial Education.....	1,683.31
George E. Sidle .....	*Assistant in Industrial Education.....	500 00
J. L. Clifton .....	Professor of Principles and Practices of Education .....	3,300.00
*F. C. Landsittle .....	Assistant Professor of Principles and Practices of Education .....	1,500.00
*Raymond D. Bennett .....	Supervisor of Practical Teaching.....	1,500.00
Geo. F. Arps .....	Professor of Psychology .....	3,500.00
Rudolph Pintner .....	Professor of Psychology .....	4,000.00
A. P. Weiss .....	Professor of Psychology .....	2,750.00
J. W. Bridges .....	Assistant Professor of Psychology.....	2,300.00
Harry W. Crane .....	Assistant Professor of Psychology.....	2,000.00
John E. Evans .....	Instructor in Psychology .....	900.00
Elmer A. Culler .....	Instructor in Psychology .....	1,500.00
Genevieve L. Coy .....	Instructor in Psychology .....	1,450.00
A. S. Rogers .....	Instructor in Psychology .....	1,400.00
Harold E. Burt .....	Instructor in Psychology .....	1,750.00
*Florence Fitzgerald .....	Assistant in Psychology .....	450.00
Ellis L. Noble .....	Laboratory Assistant in Psychology...	500.00
*Cheves W. Perky .....	Instructor in Psychology .....	900.00
*Helen Marshall .....	Assistant in Psychology .....	450.00
Samuel W. Brown .....	Professor of School Administration...	2,825.00
C. C. McCracken .....	Professor of School Administration and Assistant Dean and Secretary of College of Education .....	3,383.30
E. F. Coddington .....	Acting Dean of the College of Engineering .....	1,200.00
Lenora Glasgow .....	Secretary to Dean of College of Engineering .....	1,200.00
J. N. Bradford .....	Professor of Architecture .....	1,200.00
Charles St. J. Chubb.....	Professor of Architecture .....	2,875 00
H. D. Smith.....	Professor of Architecture .....	2,854.15
F. H. Haskett .....	Instructor in Architecture .....	2,500.00
W. C. Ronan .....	Assistant Professor of Architecture.....	2,050.00
H. C. Lord .....	Professor of Astronomy .....	3,000.00
E. S. Manson .....	Associate Professor of Astronomy .....	2,125.00
S. F. Stapleton .....	Student Assistant in Astronomy .....	300.00
Arthur S. Watts .....	Professor of Ceramics .....	3,250.00
Carl B. Harrop .....	Assistant Professor of Ceramics.....	2,250.00
John Lysatt .....	Technician in Ceramics .....	700.00
James T. Robson.....	Instructor in Ceramics .....	1,000.00
W. E. Henderson .....	Professor of Chemistry .....	3,250.00
W. L. Evans .....	Professor of Chemistry .....	3,500.00
J. R. Withrow .....	Professor of Chemistry .....	3,000.00
C. W. Foulk .....	Professor of Chemistry .....	2,875.00
C. E. Boord .....	Assistant Professor of Chemistry .....	2,500.00

\*Part time.

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
Jesse E. Day .....	Assistant Professor in Chemistry.....	\$2,125.00
Marion Hollingsworth .....	Assistant Professor of Chemistry .....	1,900.00
Edward Mack, Jr. ....	Assistant Professor of Chemistry .....	2,500.00
F. C. Vilbrandt .....	Instructor in Chemistry .....	1,600.00
O. L. Hoover .....	Assistant in Chemistry .....	700.00
C. D. Looker .....	Assistant in Chemistry .....	700.00
*Jacob Cornog .....	Assistant in Chemistry .....	350.00
Alpha J. Will .....	Assistant in Chemistry .....	500.00
Ermina S. Cox .....	Assistant in Chemistry .....	700.00
Merle L. Dundon .....	Assistant in Chemistry .....	700.00
Joseph S. Haskins .....	Assistant in Chemistry .....	700.00
Paul Stegeman .....	Assistant in Chemistry .....	700.00
A. E. Galloway .....	Assistant in Chemistry .....	700.00
Wm. S. Jones .....	Graduate Assistant in Chemistry.....	300.00
Andrew Karsten .....	Graduate Assistant in Chemistry.....	300.00
L. J. Michael .....	Graduate Assistant in Chemistry.....	300.00
G. D. Patterson .....	Graduate Assistant in Chemistry.....	300.00
J. B. Peterson .....	Graduate Assistant in Chemistry.....	300.00
Rufus D. Reed .....	Graduate Assistant in Chemistry.....	300.00
Wm. R. Stemen .....	Graduate Assistant in Chemistry.....	300.00
Laurence W. Stout .....	Graduate Assistant in Chemistry.....	300.00
H. J. Bankston .....	Graduate Assistant in Chemistry.....	300.00
Roger P. Loveland .....	Graduate Assistant in Chemistry.....	300.00
C. A. Buehler .....	Graduate Assistant in Chemistry.....	300.00
*Marion G. Smith .....	Student Assistant in Chemistry .....	125.00
U. S. Jamison .....	Graduate Assistant in Chemistry.....	300.00
Pao Ho Vong .....	Graduate Assistant in Chemistry.....	300.00
Robert S. Hanson .....	Student Assistant in Chemistry.....	250.00
*Jennie C. Fisher .....	Assistant in Chemistry .....	371.65
Jerome R. Mueller .....	Graduate Assistant in Chemistry.....	300.00
H. K. Linzell .....	Student Assistant in Chemistry .....	300.00
*John H. Ruth .....	Student Assistant in Chemistry .....	225.00
*Ruth Miller .....	Student Assistant in Chemistry .....	125.00
C. E. Sherman .....	Professor of Civil Engineering.....	3,500.00
F. H. Eno .....	Professor of Civil Engineering.....	3,000.00
Clyde T. Morris .....	Professor of Civil Engineering.....	3,500.00
R. C. Sloane .....	Assistant Professor of Civil Engineering .....	2,375.00
J. R. Shank .....	Assistant Professor of Civil Engineering .....	2,125.00
Wilhelm Neilson .....	Instructor in Civil Engineering .....	1,750.00
*Samuel Folk .....	Instructor in Civil Engineering .....	600.00
*Walter J. Essman .....	Instructor in Civil Engineering .....	600.00
F. C. Caldwell .....	Professor of Electrical Engineering...	3,000.00
C. A. Wright .....	Professor of Electrical Engineering...	2,875.00
J. E. Shepardson .....	Instructor in Electrical Engineering...	1,800.00
R. A. Brown .....	Assistant Professor of Electrical Engineering .....	1,900.00
A. G. Puchstein .....	Assistant Professor of Electrical Engineering .....	1,800.00
*W. R. Alexander .....	Machinist in Electrical Engineering...	1,305.00
*Floyd Grant .....	Assistant Mechanician in Electrical Engineering .....	100.00

\*Part time.



<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
*Wallace Van Etten	Assistant Mechanician in Electrical Engineering	\$ 100.00
Julius Bosway	Student Assistant in Electrical Engineering	200.00
Karl D. Price	Student Assistant in Electrical Engineering	100.00
Spencer A. Griffin	Student Assistant in Electrical Engineering	200.00
*Donald Guthrie	Assistant to Mechanician in Electrical Engineering	225.00
*Frank Bisel	Assistant to Mechanician in Electrical Engineering	225.00
Thomas E. French	Professor of Engineering Drawing	3,500.00
Robert Meiklejohn	Assistant Professor of Engineering Drawing	2,550.00
O. E. Williams	Assistant Professor of Engineering Drawing	2,125.00
W. D. Turnbull	Assistant Professor of Engineering Drawing	2,125.00
C. L. Svensen	Assistant Professor of Engineering Drawing	2,125.00
W. B. Field	Instructor in Engineering Drawing	1,625.00
Lloyd Eagle	Instructor in Engineering Drawing	1,350.00
Floyd M. Martin	Assistant in Engineering Drawing	950.00
Tecla Haldy	Assistant in Engineering Drawing	900.00
Dale O. Miller	Student Assistant in Engineering Drawing	300.00
Paul Shawen	Student Assistant in Engineering Drawing	300.00
Ralph D. Baker	Student Assistant in Engineering Drawing	300.00
Ralph S. Paffenbarger	Instructor in Engineering Drawing	1,425.00
W. A. Knight	Professor of Mechanical Practice and Acting Head of Industrial Arts	2,750.00
C. M. Beem	Instructor in Industrial Arts	1,705.00
U. W. Denman	Instructor in Industrial Arts	1,565.00
J. A. Foust	Instructor in Industrial Arts	1,565.00
J. J. Breckur	Instructor in Industrial Arts	1,455.00
Carl M. Senn	Instructor in Industrial Arts	1,250.00
Harold Wright	Instructor in Industrial Arts	1,455.00
Philip L. Gierick	Student Assistant in Industrial Arts	300.00
Chas. H. Woodruff	Shop Assistant in Industrial Arts	1,285.00
*Carl P. Effler	Assistant in Industrial Arts	75.00
Oscar D. Rickley	Assistant in Machine Work in Industrial Arts	950.00
R. D. Bohannon	Professor of Mathematics	3,500.00
K. D. Swartzel	Professor of Mathematics	2,875.00
H. W. Kuhn	Professor of Mathematics	2,875.00
S. E. Rasor	Professor of Mathematics	2,625.00
G. W. McCoard	Professor of Mathematics	1,900.00
C. C. Morris	Professor of Mathematics	2,125.00
C. L. Arnold	Associate Professor of Mathematics	2,375.00
J. D. Preston	Assistant Professor of Mathematics	1,550.00
Grace Bareis	Assistant Professor of Mathematics	1,550.00
Harry M. Beatty	Assistant Professor of Mathematics	1,750.00

\*Part time.

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
Hortense Rickard .....	Instructor in Mathematics .....	\$1,550.00
James H. Weaver .....	Instructor in Mathematics .....	1,750.00
*J. C. Reitz .....	Assistant Professor of Mathematics...	600.00
Wm. T. Magruder .....	Professor of Mechanical Engineering..	3,500.00
F. W. Marquis .....	Professor of Mechanical Engineering..	3,000.00
C. A. Norman .....	Professor of Mechanical Engineering..	3,000.00
H. Judd .....	Associate Professor of Mechanical Engineering .....	2,625.00
Paul Bucher .....	Instructor in Mechanical Engineering..	1,600.00
A. I. Brown .....	Assistant Professor in Mechanical Engineering .....	2,300.00
J. J. Davis .....	Machinist in Mechanical Engineering..	1,300.00
R. L. Pratt .....	Stationary Engineering in Mechanical Engineering .....	1,275.00
*Glenn E. Edmunds .....	Assistant in Mechanical Engineering..	250.00
*Relna M. Eyman .....	Student Assistant in Mechanical Engineering .....	30.00
Fillmore D. Swan.....	Student Assistant in Mechanical Engineering .....	390.00
Herman Steiger .....	Student Assistant in Mechanical Engineering .....	525.00
*Leonard R. Strong .....	Student Assistant in Mechanical Engineering .....	40.00
James E. Boyd .....	Professor of Mechanics .....	3,250.00
E. F. Coddington .....	Professor of Mechanics .....	3,000.00
Percy W. Ott .....	Instructor in Mechanics .....	1,500.00
D. J. Demorest .....	Professor of Metallurgy .....	3,000.00
*Downs Schaff .....	Professor of Metallurgy .....	1,500.00
*Wm. A. Mueller .....	Special Instructor in Metallurgy .....	1,000.00
Frank A. Ray .....	Professor of Mine Engineering.....	1,000.00
H. E. Nold .....	Assistant Professor and Acting Head of Mine Engineering .....	2,500.00
Frank R. Morris .....	Student Assistant in Mine Engineering	300.00
*Wm. E. Cramer .....	Student Assistant in Mine Engineering	150.00
W. J. McCaughey .....	Professor of Mineralogy .....	2,750.00
A. D. Cole .....	Professor of Physics .....	3,500.00
R. F. Earhart .....	Professor of Physics .....	2,875.00
Alpheus Smith .....	Professor of Physics .....	2,875.00
F. C. Blake .....	Professor of Physics .....	2,875.00
Howard D. Minchin .....	Professor of Optometry .....	3,000.00
H. G. Heil .....	Assistant Professor of Physics.....	2,125.00
D. A. Woodbury .....	Instructor in Physics .....	1,700.00
Alva W. Smith .....	Instructor in Physics .....	1,700.00
R. C. Ditto .....	Instructor in Physics .....	1,550.00
John S. Ward .....	Instructor in Physics .....	1,250.00
A. P. Freund.....	Mechanician in Physics .....	1,500.00
Charles W. Jarvis .....	Instructor in Physics .....	1,650.00
Claude A. Burrett .....	Dean and Professor of the College of Homoeopathic Medicine .....	3,500.00
J. A. Ferree .....	Professor of Homoeopathic Medicine..	2,600.00
F. B. Grosvenor.....	Professor of Homoeopathic Medicine..	2,600.00
A. E. Hinsdale .....	Secretary and Professor of Homoeopathic Medicine .....	2,850.00
W. A. Humphrey .....	Professor of Homoeopathic Medicine..	2,600.00

\*Part time.



<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
R. C. Wolcott .....	Professor of Homoeopathic Medicine...	\$2,600.00
Earl H. Baxter .....	Instructor of Homoeopathic Medicine..	1,350.00
W. B. Carpenter .....	Lecturer in Homoeopathic Medicine...	300.00
Harry M. Sage .....	Assistant in Homoeopathic Medicine...	650.00
Harry E. Cauffield .....	Chief Resident Interne in Homoeopathic Medicine .....	400.00
Alpha F. Hawk .....	Assistant in Homoeopathic Medicine...	600.00
Mozelle Whipps .....	Assistant in Homoeopathic Medicine...	1,000.00
*Robert S. Coppess .....	Clinical Assistant in Homoeopathic Medicine .....	300.00
Floyd M. Green .....	Supervising Anesthetist in Homoeo- pathic Medicine .....	600.00
Edgar B. Junkerman .....	Lecturer in Homoeopathic Medicine...	No salary
*Charles G. Swan .....	Clinical Assistant in Homoeopathic Medicine .....	300.00
Gertrude Loessel .....	Principal of Nurses' Training School in Homoeopathic Medicine .....	950.00
*Eva Graham .....	Pharmacy Nurse in Homoeopathic Hos- pital .....	190.00
*Kathleen Hannon .....	Supervisor of Maternity and Children's Ward in Homoeopathic Hospital...	120.00
*Anita Spencer .....	Supervisor of Operating Room in Hom- oeopathic Hospital .....	150.00
*Mary I. Hammell .....	Night Supervisor in Homoeopathic Hos- pital .....	330.00
Katherine Percy .....	Dietitian in Homoeopathic Hospital...	745.00
*E. A. Shattuck .....	Orderly in Homoeopathic Hospital...	150.00
Jessie Harrod .....	Superintendent of Homoeopathic Hos- pital .....	1,266.65
Henrietta Hymans .....	Supervisor of Maternity and Children's Ward in Homoeopathic Hospital ..	625.00
John W. Long .....	Orderly in Homoeopathic Hospital...	750.00
*Helen Miller .....	Pharmacy Nurse in Homoeopathic Hos- pital .....	510.00
*Ethel Schaeffer .....	Night Supervisor in Homoeopathic Hos- pital .....	390.00
*Ethel M. Hardy .....	Teacher of Surgical Nursing in Homoeo- pathic Hospital .....	288.72
John J. Adams .....	Dean and Professor of the College of Law .....	5,000.00
George W. Rightmire .....	Professor of Law .....	4,000.00
Alonzo H. Tuttle .....	Professor of Law .....	4,000.00
Clarence D. Laylin .....	Professor of Law .....	4,000.00
Joseph W. Madden .....	Professor of Law .....	3,500.00
E. F. McCampbell .....	Dean of the College of Medicine...	4,000.00
F. L. Landacre .....	Professor and Head of Anatomy.....	3,500.00
Edward C. Buck .....	Assistant Professor of Anatomy.....	2,875.00
Rollo C. Baker .....	Instructor in Anatomy .....	1,900.00
R. A. Knouff .....	Instructor in Anatomy .....	1,800.00
Clarence I. Britt .....	Assistant in Anatomy .....	750.00
Emma Courtright .....	Assistant in Anatomy .....	750.00
Thomas Evans .....	Technician in Anatomy .....	960.00
Mary H. Oliver .....	Assistant in Anatomy .....	600.00
Ethel Esper .....	Student Assistant in Anatomy .....	300.00
*W. C. Rohleder .....	Student Assistant in Anatomy .....	150.00

\*Part time.

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
Charles B. Morrey	Professor and Head of Bacteriology	\$3,250.00
William A. Starin	Professor of Bacteriology	2,650.00
F. O. Ockerblad	Instructor in Bacteriology	1,350.00
Vera McC. Masters	Instructor in Bacteriology	1,500.00
Wm. M. Murray	Laboratory Assistant in Bacteriology	750.00
Frank W. Watson	Instructor in Bacteriology	1,000.00
*R. V. Sosa	Pharmacist—State Street	75.00
*R. V. Sosa	Pharmacist	150.00
*Gaylord Schutts	Pharmacist	150.00
*Roy E. Krigbaum	Interne	75.00
*Joseph M. Griffith	Interne	75.00
*Charles J. Upham	Interne	75.00
*H. E. Levi	Interne	75.00
*Harry L. Griffith	Interne	75.00
John H. J. Upham	Professor and Acting Head of Medicine	1,800.00
H. B. Blakey	Assistant Professor of Medicine	200.00
J. J. Coons	Assistant Professor of Medicine	200.00
Charles J. Shepard	Assistant Professor of Medicine	200.00
E. G. Horton	Assistant Professor of Medicine	350.00
E. J. Gordon	Assistant Professor and Resident Physician—Protestant Hospital	1,250.00
S. A. Hatfield	Assistant Professor and Resident Physician—St. Francis Hospital	2,420.81
J. W. Leist	Instructor in Medicine	1,250.00
Wm. H. Pritchard	Instructor in Medicine	200.00
R. A. Ramsey	Instructor in Medicine	300.00
J. W. Sheets	Instructor in Medicine	300.00
Samuel Hindman	Instructor in Medicine	350.00
F. C. Wagenhals	Assistant in Medicine	350.00
S. D. Edelman	Assistant in Medicine	150.00
E. F. Peinert	Assistant in Medicine	100.00
H. A. Minthorn	Assistant in Medicine	100.00
*Herbert V. Weihrauch	Assistant in Medicine	100.00
Andrews Rogers	Professor and Head of Obstetrics	1,050.00
*Charles W. Hadley	Instructor in Obstetrics	350.00
G. W. Brehm	Instructor in Obstetrics	500.00
Walter E. Duffee	Assistant in Obstetrics	550.00
John Edwin Brown	Professor and Head of Ophthalmology and Oto-Laryngology	300.00
Andrew Timberman	Professor of Ophthalmology and Oto-Laryngology	200.00
George C. Schaeffer	Instructor of Ophthalmology and Oto-Laryngology	350.00
Hugh G. Beatty	Instructor in Ophthalmology and Oto-Laryngology	400.00
Andrew W. Prout	Instructor in Ophthalmology and Oto-Laryngology	400.00
Arthur M. Hauer	Instructor in Ophthalmology and Oto-Laryngology	400.00
*Ivor G. Clark	Instructor in Ophthalmology and Oto-Laryngology	280.00
John B. Alcorn	Instructor in Ophthalmology and Oto-Laryngology	350.00

\*Part time.



<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
W. H. Hodges .....	Assistant in Ophthalmology and Otolaryngology .....	\$ 250.00
T. Reese Williams .....	Assistant in Ophthalmology and Otolaryngology .....	250.00
*Clarence B. Tanner .....	Assistant in Ophthalmology and Otolaryngology .....	150.00
Ernest Scott .....	Professor and Head of Pathology .....	3,500.00
Carl L. Spohr .....	Professor of Pathology .....	3,000.00
L. H. Van Buskirk .....	Instructor in Pathology .....	2,100.00
Philip J. Reel .....	Instructor in Pathology .....	1,250.00
Hazel Cameron .....	Assistant in Pathology .....	1,358.31
*Margaret Fisher .....	Technical Assistant .....	583.31
Mortimer Banks .....	Technical Assistant .....	960.00
*Clinton L. Bryant .....	Technical Assistant .....	320.00
Clyde Brooks .....	Professor and Head of Physiology, Physiological Chemistry and Pharmacy .....	3,750.00
A. M. Bleile .....	Professor of Physiology, Phys. Chemistry and Pharmacology .....	3,000.00
Clayton McPeck .....	Assistant Professor of Physiology, Phys. Chemistry and Pharmacology..	2,325.00
R. J. Seymour .....	Assistant Professor of Physiology, Phys. Chemistry and Pharmacology..	2,325.00
E. P. Durrant .....	Instructor in Physiology, Phys. Chemistry and Pharmacology .....	1,750.00
William Irving .....	Technical Assistant in Physiology, Phys. Chemistry and Pharmacology..	2,000.00
*Clara Wegener .....	Research Assistant in Physiology, Phys. Chemistry and Pharmacology .....	466.64
Harry Lutz .....	Student Assistant in Physiology, Phys. Chemistry and Pharmacology .....	300.00
*Gizella A. Klein .....	Research Assistant in Physiology, Phys. Chemistry and Pharmacology .....	233.32
*Robert G. Patterson .....	Assistant Professor and Director of Public Health and Sanitation .....	1,250.00
E. R. Hayhurst .....	Professor and Medical Director of Public Health and Sanitation .....	2,900.00
Verne A. Dodd .....	Assistant Professor, Chief of Clinical Staff and Acting Head of Surgery and Gynecology .....	2,600.00
I. B. Harris .....	Assistant Professor, Chief of Staff of Surgery and Gynecology .....	200.00
Yeatman Wardlow .....	Professor of Surgery and Gynecology..	300.00
Fred Fletcher .....	Assistant Professor of Surgery and Gynecology .....	200.00
Leslie L. Bigelow .....	Assistant Professor—Chief of Staff of Surgery and Gynecology .....	1,750.00
Edwin A. Hamilton .....	Assistant Professor of Surgery and Gynecology .....	750.00
John W. Means .....	Instructor in Surgery and Gynecology..	900.00
*Philip D. Wilson .....	Instructor in Surgery and Gynecology..	160.00
H. A. Baldwin .....	Instructor in Surgery and Gynecology..	300.00
Joseph M. Gallen .....	Instructor in Surgery and Gynecology..	200.00
Hugh J. Means .....	Instructor in Surgery and Gynecology..	783.31
G. H. Shawaker .....	Assistant in Surgery and Gynecology..	250.00
H. O. Bratton .....	Instructor in Surgery and Gynecology..	250.00

\*Part time.

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
P. E. Stiffey .....	Assistant in Surgery and Genecology..	\$ 300.00
W. N. Taylor .....	Assistant in Surgery and Gynecology..	250.00
F. M. Stanton .....	Assistant in Surgery and Gynecology..	200.00
Mary Worch .....	Technician in Surgery and Gynecology	700.00
A. M. Steinfeld .....	Assistant Professor of Orthopedic Surgery .....	200.00
Luke V. Zartman .....	Instructor in Surgery and Gynecology..	450.00
*Edward C. Ludwig .....	Instructor in Surgery and Gynecology..	150.00
Clair A. Dye .....	Professor and Acting Dean of the Col- lege of Pharmacy .....	3,050.00
Edward D. Davy .....	Assistant Professor of Pharmacy.....	1,980.00
Wm. S. Stevens .....	Instructor in Pharmacy .....	1,025.00
David S. White .....	Dean and Professor of the College of Veterinary Medicine .....	4,000.00
S. Sisson .....	Professor of Veterinary Medicine.....	1,800.00
O. V. Brumley .....	Professor and Director of Veterinary Medicine .....	4,500.00
A. G. G. Richardson .....	Professor of Veterinary Medicine.....	2,875.00
James H. Snook .....	Assistant Professor of Veterinary Medicine .....	2,265.00
J. N. Shoemaker .....	Assistant Professor of Veterinary Medicine .....	2,200.00
Walter R. Hobbs .....	Assistant Professor of Veterinary Medicine .....	1,983.31
R. E. Rebrassier .....	Instructor in Veterinary Medicine.....	1,791.65
*R. L. Mundhenk .....	Assistant Professor of Veterinary Medicine .....	486.00
R. A. Hendershott .....	Assistant in Veterinary Medicine.....	1,365.00
*Benj. M. Ford .....	Clerk in Veterinary Medicine.....	270.74
Wm. H. Walker .....	Groom in Veterinary Medicine.....	1,045.00
*LeRoy Wilson .....	Groom in Veterinary Medicine.....	855.00
*John Torr, Jr. ....	Clerk in Veterinary Medicine.....	782.40
*James D. Grossman .....	Professor of Veterinary Medicine.....	2,200.00
*E. L. Clements .....	Technician in Veterinary Medicine.....	425.00
*I. M. Stillwell .....	Groom in Veterinary Medicine.....	200.00
Wm. McPherson .....	Dean of the Graduate School.....	4,000.00
*Marjorie Aborn .....	Graduate Fellow .....	250.00
H. L. Dozier .....	Graduate Fellow .....	500.00
E. F. George .....	Graduate Fellow .....	500.00
T. L. Guyton .....	Graduate Fellow .....	500.00
Eleanor P. Haas .....	Graduate Fellow .....	500.00
S. K. Mitra .....	Graduate Fellow .....	500.00
Jeanette Reamer .....	Graduate Fellow .....	500.00
C. F. Rudman .....	Graduate Fellow .....	500.00
Lily Bell Sefton .....	Graduate Fellow .....	500.00
*Jacob Cornog .....	Graduate Fellow .....	250.00
Richard Bradfield .....	Graduate Scholar .....	250.00
Harry F. Kohl .....	Graduate Scholar .....	250.00
Clarice Hobensack .....	Graduate Scholar .....	250.00
Margaret E. Jones .....	Graduate Scholar .....	250.00
J. C. Overpeck .....	Graduate Scholar .....	250.00
Jean K. E. Patton .....	Graduate Scholar .....	250.00
Florence H. Rees .....	Graduate Scholar .....	250.00
Marion Racer .....	Graduate Scholar .....	250.00

\*Part time.



<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
C. L. Underwood .....	Graduate Scholar .....	\$ 250.00
Harry I. Marshall .....	Fellow .....	250.00
Olive B. Jones .....	Librarian .....	2,200.00
C. W. Reeder .....	Reference Librarian .....	2,041.66
Maud D. Jeffrey .....	Reference Librarian .....	1,741.66
Gertrude S. Kellicott .....	Accession Librarian .....	1,741.66
Bertha M. Schneider .....	Head Cataloguer .....	1,741.66
Donald Leidigh .....	Accession Assistant .....	1,166.66
Alice D. McKee .....	Cataloguer .....	1,241.66
Esther S. Chapin .....	Cataloguer .....	1,200.00
Alice D. Cruikshank .....	Cataloguer .....	1,110.00
Muriel J. Schabacker .....	Cataloguer .....	1,170.00
Louise Schoeneweiss .....	Library Assistant .....	1,181.66
*Marguerite Mitchell .....	Library Assistant .....	150.00
*Alice L. Morris .....	Library Assistant .....	127.50
Mae M. Walker (Mrs.) .....	Library Assistant .....	925.00
Harriet N. Townshend .....	Library Assistant .....	925.00
Lillian M. Nippert .....	Library Assistant .....	925.00
Ethel M. Miller .....	Library Assistant .....	925.00
Edith B. Cooperrider .....	Library Assistant .....	925.00
Helen E. Sells .....	Library Assistant .....	925.00
Frances Mason .....	Library Assistant .....	865.00
*Marguerite K. Forwick .....	Library Assistant .....	65.00
Susan Marksbury .....	Library Assistant .....	865.00
Charlotte J. Thomas .....	Library Assistant .....	1,185.00
*Gertrude F. North .....	Library Assistant .....	250.00
Marie A. Hopkins .....	Library Assistant .....	625.00
Helen Beall .....	Library Assistant .....	625.00
*George D. Brush .....	Night Assistant .....	280.00
George W. Starr .....	Night Assistant .....	400.00
*E. C. Hedrick .....	Check Room Attendant .....	375.00
*Elma E. Hamilton .....	Library Assistant .....	350.00
*Marie K. Bulkley .....	Library Assistant .....	100.00
*Grace Oldham .....	Library Assistant .....	150.00
*Minnette Y. Fritts .....	Library Assistant .....	50.00
*William A. Dougherty .....	Library Assistant .....	300.00
*Joseph E. Fisher .....	Library Assistant .....	175.00
Mary E. Bigger .....	Assistant .....	775.00
*Virginia Harrison .....	Library Assistant .....	690.00
*Helen K. Laughlin .....	Library Assistant .....	665.00
*Ruth E. Waters .....	Library Assistant .....	187.50
*Claude J. Bartlett .....	Library Assistant .....	237.50
*William E. Hanna .....	Library Assistant .....	125.00
*Calvin H. Cool .....	Night Assistant .....	200.00
*Mary R. Rinker .....	Library Assistant .....	275.00
*Jean Evans .....	Library Assistant .....	250.00
*Hugh Winbigler .....	Assistant .....	112.50
*Wesley S. Green .....	Assistant .....	112.50
*Harry W. Chance .....	Assistant .....	37.50
*Esther Early .....	Assistant .....	112.50
*Francis M. Smith .....	Library Assistant .....	87.50
*Mrs. Earl Curry .....	Library Assistant .....	62.50

\*Part time.

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
*John W. Winn .....	Library Assistant .....	\$ 50.00
*Ralph H. Stimson .....	Library Assistant .....	70.00
Gustav Bruder .....	Band Leader in Military Science.....	500.00
J. F. Madden .....	Sergeant, U. S. Army .....	150.00
*John O'Rourke .....	Sergeant, U. S. Army .....	131.25
L. W. St. John .....	Professor of Physical Education.....	5,000.00
J. H. Nichols .....	Professor of Physical Education.....	2,875.00
F. R. Castleman .....	Professor of Physical Education.....	2,750.00
G. M. Trautman .....	Assistant Professor of Physical Educa- tion .....	2,250.00
*O. C. Bird .....	Assistant Professor of Physical Educa- tion .....	1,139.50
H. C. Ohlson .....	Instructor in Physical Education.....	1,800.00
Florence A. Meyer .....	Assistant Professor of Physical Educa- tion .....	1,800.00
Mrs. Clark Hunter .....	Pianist—Physical Education .....	660.00
Laura Ellen Fredo .....	Maid—Physical Education .....	650.00
Ethel M. Schofield .....	Instructor in Physical Education .....	1,300.00
T. H. Connell .....	Student Assistant in Physical Educa- tion .....	300.00
Clara Raynor-Ranck .....	Instructor in Physical Education.....	1,000.00
*Samuel H. Cobb .....	Instructor in Physical Education.....	985.50
*Harry C. Caldwell .....	Assistant in Physical Education.....	200.00
*Elsie Hinkle .....	Student Assistant in Physical Educa- tion .....	120.00
Katherine A. Vogel .....	Executive Clerk .....	1,333.33
*Hazel M. Lewis .....	Stenographer—President's Office .....	212.50
*Marie Bowman .....	Stenographer—President's Office .....	835.77
Carl E. Steeb .....	Secretary and Business Manager.....	5,000.00
*Marie Bowman .....	Chief Clerk .....	184.61
R. M. Royer .....	Purchasing Agent .....	2,500.00
*Marguerite L. Makepeace .....	Clerk .....	85.00
*Ethel Gilkey .....	Clerk .....	775.00
Charles A. Kuntz .....	Comptroller .....	2,150.00
*Bess C. Watters .....	Cashier .....	758.31
*Mary Kraus .....	Auditor .....	1,000.00
*Hazel Bratton .....	Voucher Clerk .....	480.00
*Esther Morrow .....	Bill Clerk .....	236.72
Florence Naile .....	Bookkeeper .....	1,285.00
*Marie D. Haines .....	Clerk .....	791.66
Folris D. Hane .....	Inventory Clerk .....	985.00
*Corrinne Richter .....	Clerk .....	321.00
*Harriett Foster .....	Typist .....	805.77
*Ednah Pugh .....	Stenographer .....	54.80
*Mary McMillen Allen .....	Stenographer .....	725.00
*Margaret H. Sturm .....	Stenographer .....	691.35
*Clara La Motte .....	Clerk .....	582.20
*Anna L. O'Rourke .....	Stenographer .....	445.00
*Dorothy M. Lewis .....	Student Clerk .....	358.40
*Mary Heiser .....	Typist .....	382.50
Edith D. Cockins .....	Registrar .....	2,500.00
Lucy M. Taylor .....	Assistant to Registrar .....	1,441.66
Clara Miller .....	Assistant to Registrar .....	1,175.00

\*Part time.



<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
Helen Clarke	Assistant to Registrar	\$1,130.00
Ethyl Woodbury	Assistant to Registrar	1,075.00
Helen Frame	Assistant to Registrar	1,075.00
*Ruth E. Agler	Assistant to Registrar	300.00
*Marjorie Dean	Assistant to Registrar	210.00
*Edna M. Rogers	Assistant to Registrar	350.00
Daisy Davis	Assistant to Registrar	985.00
*Caroline M. McNeal	Assistant to Registrar	400.00
*Dorothy Morton	Assistant to Registrar	673.46
*Louise K. Leslie	Assistant to Registrar	140.00
*Eva M. Coons	Assistant to Registrar	560.00
*Monabelle Lentz	Assistant to Registrar	320.00
*Clara Pierce	Assistant to Registrar	280.00
*Bonnie Woodbury	Assistant to Registrar	280.00
*Louise Leslie	Assistant to Registrar	280.00
*Lester E. Wolfe	Secretary to Entrance Board	1,800.00
M. Helen Pugh	Stenographer	865.00
*Elizabeth Conrad	Dean of Women	2,200.00
*Mrs. Eleanor Smith	Housing Inspector	200.00
*Carl H. Koenig	Musical Director	750.00
H. S. Wingert	Director of Student Health Service	2,875.00
*Mrs. Ethel L. Smith	Nurse	690.00
*F. E. Jones	Director of Stores and Receiving	800.00
Charles E. Findlay	Secretary to the Dean of the College of Medicine	1,525.00
Hugh Hardy	Stenographer	865.00
Annette M. Shugert	Clerk	925.00
Mabel Moran	Stenographer	865.00
*Clarissa Arndt	Stenographer	420.00
*W. Aimee Obaugh	Stenographer	432.50
Mary Lahmering	Stenographer	865.00
*Mary Thomas Reichel	Stenographer	158.85
Eva Smith	Stenographer	865.00
*Edith Rathbun	Stenographer	236.92
Alberta Williams	Stenographer	865.00
Victoria Reichel	Typist	745.00
Nora Peck	Stenographer	925.00
Alice Moran	Stenographer	865.00
*Duncan Cameron	Stenographer	210.00
*Marie Hoffman	Stenographer	432.50
*Catherine M. Doody	Stenographer	640.00
*Margaret M. Ryan	Stenographer	499.32
Lillian Moor	Stenographer	865.00
Muriel Snyder	Stenographer	865.00
*Orleta Ansel	Stenographer	105.00
*Cecelia Ryan	Stenographer	432.50
*Mary E. McMillen	Stenographer	140.00
Bernice Blue	Secretary to Dean	845.00
Helen Dunlap	Stenographer	865.00
Dora M. Soler	Stenographer	865.00
Mary J. Hunter	Stenographer	865.00
Marie G. Combs	Stenographer	865.00

\*Part time.

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
*Bertha Wolman .....	Stenographer .....	\$ 70.00
*Ethel Snyder .....	Stenographer .....	70.00
Sarah Boatman .....	Stenographer .....	865.00
Jane Porter .....	Stenographer .....	845.00
Florence E. Courtright .....	Stenographer .....	865.00
Ruth E. Speaker .....	Stenographer .....	865.00
*Helen Vogel .....	Stenographer .....	464.27
*Henrietta Jettinghoff .....	Stenographer .....	180.38
*Edna B. Pratt .....	Stenographer .....	299.60
Marie Kuglen .....	Stenographer .....	865.00
*Mary Avery .....	Stenographer .....	350.00
*Anne G. Bierman .....	Stenographer .....	680.00
Verl Billingsley .....	Stenographer .....	795.00
*Margaret Hoffman .....	Stenographer .....	215.38
*Dorothy Swan .....	Stenographer .....	663.07
*Carman Carlyle .....	Stenographer .....	655.00
*Oleta L. Simmerman .....	Stenographer .....	100.80
*Inez P. Biddle .....	Stenographer .....	327.50
*Loretta Meinert .....	Stenographer .....	630.77
*Besse Neeff .....	Stenographer .....	548.60
*Lucille B. Miller .....	Stenographer .....	494.50
*Mary G. Judy .....	Stenographer .....	315.00
*Sylvia M. Byer .....	Stenographer .....	58.25
*Gladys Rice .....	Stenographer .....	55.92
*Elouise Terbrueggen .....	Stenographer .....	345.00
*Luella Wright .....	Stenographer .....	350.00
*Helen F. Powell .....	Stenographer .....	365.00
*Louise Pitts .....	Stenographer .....	317.50
*Eleanor Kielmyer .....	Stenographer .....	382.50
Wm. C. McCracken .....	Superintendent of Buildings and Grounds and Chief Engineer .....	3,500.00
*Lee E. Vigor .....	Stenographer and Clerk .....	676.64
*Earl R. Cohee .....	Clerk .....	405.00
*O. C. Kline .....	Laborer .....	42.00
*H. A. Laws .....	Swine Herdsman .....	160.00
*Paul S. Jackson .....	Dairy Cattle Herdsman .....	655.00
George Taylor .....	Beef Cattle Herdsman .....	1,105.00
William Franklin .....	Shepherd .....	1,105.00
Robert Watson .....	Groom .....	1,105.00
*Harry Thomas .....	Swine Herdsman .....	725.00
Thos. Arthur Bayes .....	Poultryman .....	1,105.00
L. G. Souders .....	Assistant Herdsman .....	925.00
*Dan Swisher .....	Assistant Shepherd .....	325.00
John T. Laws .....	Assistant Herdsman .....	865.00
L. H. Myers .....	Teamster .....	925.00
Wm. Whitaker .....	Pavilion Groom .....	925.00
*Cecil Bayes .....	Laborer .....	475.00
*C. E. Wilson .....	Laborer .....	300.00
*Wm. E. Jacobs .....	Laborer .....	425.00
*Clyde Christman .....	Laborer .....	60.00
*Wm. Kloeffer .....	Laborer .....	90.00
*Paul Haag .....	Laborer .....	210.00



<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
*Stanley Bayes .....	Assistant Poultryman .....	\$ 200.00
*Phillip Heim .....	Laborer .....	126.00
A. L. Bates .....	Driver .....	925.00
*Ralph Livingston .....	Laborer .....	190.00
*George G. Everhart .....	Laborer .....	95.00
Charles Pugh .....	Head Teamster .....	937.50
Marion Peck .....	Teamster .....	937.50
J. S. Long .....	Teamster .....	937.50
R. A. Bowers .....	Laborer .....	1,200.00
Charles Carter .....	Teamster .....	937.50
Ira Blanchard .....	Teamster .....	937.50
*W. H. Kear .....	Laborer .....	163.80
*B. L. Johnson .....	Laborer .....	425.00
*A. H. McKenzie .....	Laborer .....	412.50
*B. E. Stahl .....	Laborer .....	412.50
*H. P. Mufford .....	Laborer .....	180.00
*L. C. Prickett .....	Laborer .....	90.00
*C. J. Peterson .....	Laborer .....	90.00
R. C. Denkenwalter .....	Laborer .....	90.00
*Harry Walker .....	Laborer .....	185.00
J. P. Covan .....	Master Mechanic .....	2,210.00
W. H. Case .....	Assistant Chief Engineer .....	1,562.50
Fred Brewer .....	Engineer .....	1,314.15
W. D. Hicks .....	Engineer .....	1,314.15
R. M. Ronk .....	Engineer .....	1,314.15
C. Ashenhurst .....	Fireman .....	1,200.00
S. Lowery .....	Fireman .....	1,200.00
Frank Revels .....	Fireman .....	1,200.00
C. Woodford .....	Fireman .....	1,200.00
I. C. Reasoner .....	Blacksmith .....	1,250.00
Wm. Anderson .....	Craneman .....	1,314.15
Geo. E. Shepherd .....	Steamfitter .....	1,682.50
B. A. LeBay .....	Boiler Repair Man .....	1,350.00
*Leon Leathers .....	Heat Control Mechanician .....	339.99
Geo. W. Dillahunt .....	Electrician .....	1,518.30
E. E. Evans .....	Assistant Electrician .....	1,374.15
C. T. Fippin .....	Assistant Electrician .....	1,070.00
A. O. Kaiser .....	Helper to Auto Mechanic .....	1,250.00
Charles Reasoner .....	Helper to Blacksmith .....	890.00
*Jonathan Vollmer .....	Wiper .....	150.00
*William T. Hedges .....	Fireman .....	300.83
Thomas C. Manes .....	Fireman .....	1,010.00
*Andrew Armstrong .....	Wiper .....	700.00
*J. L. Huff .....	Plumber's Helper .....	721.65
John Kraner .....	Carpenter .....	1,575.00
E. I. Martin .....	Carpenter .....	1,406.65
*W. S. Williams .....	Carpenter .....	300.62
Robert C. Kaiser .....	Plumber .....	1,607.50
E. Inscho .....	Helper to Plumber .....	1,280.00
H. E. Truxall .....	Painter .....	1,350.00
*Eli Sherwood .....	Painter .....	540.00
James Brain .....	Painter .....	1,121.66

\*Part time.

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
H. R. Johnson .....	Tinner .....	\$1,370.00
*Roy McCauley .....	Truck Driver .....	597.72
*B. F. Tallmadge .....	Truck Driver .....	240.00
*Philo Felker .....	Carpenter .....	1,071.67
*Max Lehman .....	Painter .....	566.60
*T. McGarry .....	Foreman of Campus .....	1,030.00
Joseph Venis .....	Laborer .....	941.66
*LeRoy Howell .....	Laborer .....	607.00
J. Fredo .....	Laborer .....	941.66
L. Stewart .....	Laborer .....	941.66
J. Hobert .....	Laborer .....	941.63
J. L. Stainbrook .....	Laborer .....	941.66
C. O'Harra .....	Laborer .....	941.66
John Rhone .....	Teamster .....	941.66
*Leo Moran .....	Truck Driver .....	161.28
*Earl Bilderback .....	Foreman of Campus .....	261.30
*William H. Vaughn .....	Laborer .....	138.93
Wm. North .....	Day Policeman .....	1,141.66
H. S. Brown .....	Night Policeman .....	1,061.66
*Thomas Oram .....	Inspector of Watchmen .....	595.00
J. T. Daniels .....	Night Watchman .....	1,001.66
W. F. Mahaffey .....	Night Watchman .....	1,001.66
H. B. Case .....	Night Watchman .....	1,001.66
Alphonso Case .....	Night Watchman .....	1,001.66
T. P. Glidden .....	Watchman .....	1,001.66
*James Kirk .....	Inspector .....	420.00
*John O'Rourke .....	Inspector of Janitors .....	150.00
*Emerson R. Davis .....	Inspector of Buildings and Janitors .....	592.05
Chas. M. Hicks .....	Repair and Handy Man .....	1,101.66
Richard Brandon .....	Janitor .....	937.50
W. M. Penn .....	Janitor .....	937.50
W. M. Stahl .....	Janitor .....	937.50
D. W. Williams .....	Janitor .....	937.50
Wm. Daehler .....	Janitor .....	937.50
M. N. Cook .....	Janitor .....	937.50
Harry Chantler .....	Janitor .....	937.50
G. J. Hoesch .....	Janitor .....	937.50
O. E. Kiger .....	Janitor .....	937.50
S. A. Williams .....	Janitor .....	937.50
J. W. Brown .....	Janitor .....	937.50
George Hooley .....	Janitor .....	937.50
G. C. Denny .....	Janitor .....	937.50
R. M. Moore .....	Janitor .....	937.50
Oliver Smith .....	Janitor .....	937.50
L. F. Jordon .....	Janitor .....	937.50
*B. F. Tallmadge .....	Janitor .....	690.00
*E. L. Clements .....	Janitor .....	525.00
J. C. Ludlum .....	Janitor .....	937.50
W. Curry .....	Janitor .....	937.50
James Merrill .....	Janitor .....	875.40
*Jack Gantz .....	Janitor .....	525.00
William Pohle .....	Janitor .....	937.50

\*Part time.



<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
L. W. Richardson	Janitor	\$ 937.50
E. J. Nutt	Janitor	937.50
A. A. Hathaway	Janitor	937.50
E. P. Ames	Janitor	937.50
Robert Petrie	Janitor	937.50
*Walter J. Newlon	Janitor	375.00
*Charles E. Dice	Janitor	409.62
J. R. Butler	Janitor	937.50
Ernest Long	Janitor	937.50
*W. Buechler	Janitor	253.85
C. M. Shelton	Janitor	937.50
*C. E. Harrold	Janitor	366.00
W. C. Harbin	Janitor	937.50
John O. Kimbrough	Janitor	937.50
*Mitchell Bryant	Janitor	75.00
E. R. Muse	Janitor	937.50
C. A. Hoppler	Janitor	937.50
J. W. DeWitte	Janitor	937.50
Ernest Ford	Janitor	937.50
J. E. Kimbrough	Janitor	937.50
*Elizabeth Rauhauser	Janitress	350.00
Mrs. Lou Cornett	Janitress	650.00
Lena Gheen	Janitress	650.00
*Nancy R. Davis	Janitress	512.00
*B. N. Lewis	Janitor (Retired)	25.00
M. S. Harvey	Elevator Man	509.15
Mary Powers	Matron—Rest Room	660.00
W. M. Mutchmore	Custodian—Medical Buildings	1,200.00
*A. D. Grayson	Janitor	787.50
*Huston Jones	Janitor	787.50
*Jessie Haney	Janitress	550.00
*Forrest Spencer	Janitor	712.50
*William E. Price	Janitor	465.00
*Albert Johnson	Janitor	465.00
*Frank McCarty	Janitor	637.50
*Jack Foster	Janitor	562.50
*Gaston Hammond	Janitor	380.25
*Olaf Christianson	Janitor	487.50
*H. R. Nelson	Janitor	412.50
*Josephine Bavis	Janitress	300.00
*G. R. Pettibone	Janitor	330.00
*James Sharp	Janitor	165.00
*William Wallace	Janitor	231.00
*Elizabeth Rourke	Janitress	120.00
*Elmer E. McDowell	Janitor	104.50
*Carrie Dunning	Janitress	93.75
Mrs. Myrtle Faught	Laundress	941.66
Agnes McGrail	Laundress	650.00
*Jennie Roberts	Laundress	470.00
Ada Jenkins	Laundress	600.00
*Mary Rees	Laundress	120.00
*Mildred Grove	Laundress	180.00

\*Part time.

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
Joseph N. Bradford .....	University Architect .....	\$2,800.00
H. F. Reichard .....	Chief Draftsman .....	2,145.80
C. F. Mayer .....	Draftsman .....	1,745.81
Coletta Kelly .....	Clerk .....	1,045.00
D. J. Demorest .....	University Chemist .....	500.00
*A. J. Curtis .....	Laborer .....	280.00
*G. Edwards .....	Laborer .....	120.00
*E. Harrison .....	Laborer .....	440.00
*J. E. Jones .....	Laborer .....	40.00
*G. R. Pettibone .....	Laborer .....	40.00
*Robert Sams .....	Laborer .....	440.00
*Thomas Scott .....	Laborer .....	440.00
*Walter Mathews .....	Laborer .....	120.00
*Elmer Crick .....	Laborer .....	360.00
*Montellio Wright .....	Laborer .....	360.00
*Carl Snyder .....	Laborer .....	80.00
Allie F. Harness .....	Clerk .....	865.00
Mrs. James Merrill .....	Janitress .....	560.00
Katherine L. Pugh .....	Stenographer .....	865.00
*Mrs. Lydia Hinderer .....	Cook .....	678.75
Mrs. Ruth Nimocks .....	Housekeeper .....	487.25
Mrs. Georgie Johnson .....	Seamstress .....	364.00
*Blanche Wycoff .....	Maid .....	344.55
*Blanche Smith .....	Waitress .....	165.40
*Ethel Schaefer .....	Student Nurse .....	29.38
*Leota Fisher .....	Student Nurse .....	32.92
*Amanda Schneck .....	Student Nurse .....	31.25
*Nora Turner .....	Student Nurse .....	50.00
*Eva Clements .....	Student Nurse .....	56.25
*Emma Herbst .....	Student Nurse .....	31.25
*Margaret Wall .....	Student Nurse .....	56.25
Jaunita Hauer .....	Student Nurse .....	75.00
Marian Fledderjohann .....	Student Nurse .....	75.00
Inez Terry .....	Student Nurse .....	75.00
*Leona Hurst .....	Student Nurse .....	12.50
Kathryn Burger .....	Student Nurse .....	75.00
Lota Ethel Swingert .....	Student Nurse .....	75.00
Ethel Shaply Smith .....	Student Nurse .....	70.90
Wanda Fay Hahn .....	Student Nurse .....	70.90
Jeannette Allmand .....	Student Nurse .....	65.65
*Corda Hartman .....	Student Nurse .....	12.48
Emilie Jungerman .....	Student Nurse .....	66.70
Minnie Knecht .....	Student Nurse .....	66.70
Esther Lyon .....	Student Nurse .....	66.70
Edna R. Shultz .....	Student Nurse .....	65.30
Jane Anderson .....	Student Nurse .....	65.30
Helen Mary Amon .....	Student Nurse .....	65.30
*Hazel Hawk .....	Student Nurse .....	56.25
*Elizabeth Rourke .....	Helper in Kitchen .....	120.00
*Grace Ewing .....	Student Nurse .....	37.52
*Elizabeth Gorsach .....	Student Nurse .....	37.52
*B. Ann Connor .....	Student Nurse .....	37.52

\*Paid time.



<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
*Louwilda Glover .....	Student Nurse .....	\$ 37.52
*Madelyn Yeager .....	Student Nurse .....	37.52
*Ida Eichorn .....	Student Nurse .....	20.80
*Elizabeth Barrington .....	Student Nurse .....	20.80
*Margaret J. Rupert .....	Assistant .....	365.00
R. W. Hodgson .....	Printer .....	1,830.50
Wm. Christ .....	Printer .....	1,768.50
Clara L. Baker .....	Bookkeeper .....	1,052.50
C. F. Rodocker .....	Pressman .....	1,556.12
Sue K. Brown .....	Press-feeder .....	884.50
Thomas B. Meek .....	Editor of Lantern .....	500.00
W. Vaeth Brown .....	Business Mgr. of Lantern .....	500.00
Albert Taylor .....	Pressman (bonus) .....	208.00
*C. D. Kalb .....	Printer .....	1,449.53
*Louis F. Evans .....	Linotype Operator .....	1,400.03
*Harrison Kinzer .....	Linotype Operator .....	121.40
*Geo. Maggiore .....	Linotype Operator .....	153.49
C. E. Curran .....	du Pont Fellowship—Dept. of Chemistry .....	1,031.22
*F. E. Jones .....	Director of Stores and Receiving.....	1,483.31
Chester McClintock .....	Storekeeper—Laboratory Supply Store .....	1,825.00
H. W. Miller .....	First Assistant—Laboratory Supply Store .....	1,436.67
*G. C. Hayman .....	Second Assistant—Laboratory Supply Store .....	90.00
*Chester Spurgeon .....	Laborer—Laboratory Supply Store ...	775.00
Elizabeth P. Davies .....	Stenographer .....	890.00
Blanche Sullivan .....	Chief Clerk—Stores and Receiving....	1,206.67
Mrs. Mabel Clum .....	Clerk and Typist—Stores and Receiving .....	925.00
*Margeretha Vallery .....	Clerk—General Store .....	140.00
Earl Conway .....	Stock Clerk—General Store .....	1,206.67
James Lawson .....	Checking Clerk—Receiving Dept. ....	1,206.67
J. R. Remy .....	Deliveryman .....	1,010.00
J. R. Remy .....	Hauling Prison Labor to and from Pen. ....	156.00
*C. G. Huffman .....	Assistant Deliveryman .....	730.00
D. R. Masters .....	Keeper of Small Animals .....	996.00
*Henrietta Lahmering .....	Clerk .....	708.85
*W. R. Heiby .....	Laborer .....	292.31
*C. E. Shannon .....	Laborer .....	255.38
*L. Morrison .....	Laborer—Laboratory Supply Store ...	450.00
*Chas. H. Pugh Jr. ....	Helper .....	135.33
Josephine Matthews .....	House Superintendent—Oxley Hall....	1,445.00
Mrs. Mary L. Dilworth.....	Night Chaperone .....	965.00
Mary Warner .....	Housekeeper .....	370.00
*James Dye .....	Janitor .....	602.50
Mrs. M. J. Friend .....	Cook .....	656.00
R. Mowery .....	Cook .....	612.00
Nettie Tiguel .....	Waitress .....	401.34
*Servilla Mooty .....	Waitress .....	332.25
*Jessie Cook .....	Waitress .....	359.47
Clayetta Rhyne .....	Waitress .....	406.89
*Dollie May Jackson .....	Waitress .....	321.40
*Willie Humphreys .....	Janitor .....	81.29

\*Part time.

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
*Violet Humphreys .....	Waitress .....	\$ 55.64
*Katherine Kuthrell .....	Waitress .....	18.93
W. F. Stewart .....	Professor—Agricultural Education....	750.00
*E. F. Johnson .....	Assistant Professor .....	2,137.50
Ray Fife .....	Assistant Professor .....	2,200.00
Harold G. Kenestrick .....	Instructor .....	1,250.00
F. H. McMillen .....	Instructor .....	2,100.00
Roy D. Kauffman .....	Instructor .....	2,100.00
*Ralph H. Schreiber .....	Instructor .....	1,662.50
H. W. Nisonger .....	Instructor .....	2,100.00
*J. B. Lane .....	Instructor .....	1,650.00
*Clara Weishaupt .....	Stenographer .....	770.00
*E. F. Johnson .....	Automobile Allowance .....	166.65
*Samuel Hinkle .....	Instructor .....	450.00
Mrs. Maude G. Adams .....	Assistant Professor—Home Econom- ics—Education .....	800.00
Treva Kauffman .....	Assistant Professor .....	2,100.00
Enid Lunn .....	Instructor .....	1,800.00
Henrietta Gromme .....	Instructor .....	1,800.00
Ettie Waid .....	Instructor .....	1,500.00
Clara Bancroft .....	Assistant Professor—Critic Teacher...	1,350.00
Jeanette Bonar .....	Assistant .....	925.00
*Ida Patterson .....	Critic Teacher .....	1,515.00
E. L. Usry .....	Professor—Industrial Education .....	1,800.00
*Lawrence M. Parker .....	Instructor .....	320.00
F. M. Dannenfelser .....	Instructor .....	90.00
*J. E. Cochran .....	Instructor .....	320.00
*Robert E. Smith .....	Instructor .....	320.00
*Edwin L. Beck .....	Instructor .....	120.00
*Walter Bailey .....	Instructor .....	160.00
*Frank P. Darby .....	Instructor .....	160.00
*R. M. Sprague .....	Instructor .....	50.00

## AGRICULTURAL EXTENSION

Year Ending June 30, 1920

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
*Clark S. Wheeler .....	Director .....	\$1,225.00
*H. C. Ramsower .....	Director .....	2,000.00
Geo. B. Crane .....	Secretary .....	2,708.33
J. E. McClintock .....	Agricultural Editor .....	3,483.33
F. C. Dean .....	Assistant Agricultural Editor.....	2,525.00
Ethel M. Cadley .....	Asst. in Agricultural Extension.....	1,683.33
*E. K. Emslie .....	Photographer .....	1,291.66
J. A. Bond .....	In Charge of Addressing Room.....	1,130.00
H. L. Fackler .....	Laborer .....	1,290.00
Lucile Taylor .....	Stenographer .....	960.00
Isabel McClure .....	Stenographer .....	900.00
Jessie Haible .....	Stenographer .....	960.00
Gertrude Klein .....	Stenographer .....	960.00
Carrie Beach .....	Stenographer .....	900.00

\*Part time.



<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
*Corrine Richter .....	Stenographer .....	\$ 637.50
Kathleen McManigal .....	Chart Maker .....	780.00
O. M. Johnson .....	County Agent Leader .....	3,383.33
A. E. Anderson .....	Asst. County Agent Leader .....	3,283.33
W. W. Brownfield .....	District Supervisor .....	2,866.66
G. R. Eastwood .....	District Supervisor .....	2,866.66
*C. A. Mahan .....	District Supervisor .....	2,350.00
R. E. Bothwell .....	Asst. in County Agent Work .....	1,800.00
Agnes Jordan .....	Stenographer .....	1,080.00
Tessa Webb .....	Stenographer .....	960.00
S. L. Anderson .....	County Agri. Agent .....	2,325.00
W. S. Barden .....	County Agri. Agent .....	2,050.00
M. H. Bartter .....	County Agri. Agent .....	2,425.00
R. A. Cave .....	County Agri. Agent .....	2,366.66
Chas. F. Class .....	County Agri. Agent .....	2,000.00
R. F. Donnan .....	County Agri. Agent .....	2,325.00
L. M. Evans .....	County Agri. Agent .....	2,200.00
E. H. Faulkner .....	County Agri. Agent .....	2,325.00
C. G. Fieldner .....	County Agri. Agent .....	2,425.00
T. B. Foster .....	County Agri. Agent .....	2,566.66
W. F. Gahm .....	County Agri. Agent .....	2,208.33
J. C. Hedge .....	County Agri. Agent .....	2,383.33
S. R. Heffron .....	County Agri. Agent .....	2,166.66
W. J. Hendrix .....	County Agri. Agent .....	2,508.33
K. D. Hirn .....	County Agri. Agent .....	2,200.00
M. L. Howell .....	County Agri. Agent .....	2,566.66
M. B. Jimison .....	County Agri. Agent .....	2,650.00
C. J. Jones .....	County Agri. Agent .....	2,400.00
J. D. Hervey .....	County Agri. Agent .....	2,766.66
H. A. Lehman .....	County Agri. Agent .....	2,425.00
L. L. Mowls .....	County Agri. Agent .....	2,566.66
R. W. Munger .....	County Agri. Agent .....	2,450.00
G. C. Musgrove .....	County Agri. Agent .....	2,225.00
A. A. Olsen .....	County Agri. Agent .....	2,450.00
F. S. Prince .....	County Agri. Agent .....	2,750.00
E. P. Reed .....	County Agri. Agent .....	2,591.66
G. O. Reed .....	County Agri. Agent .....	2,166.66
Howard Rogers .....	County Agri. Agent .....	2,208.33
E. M. Rowe .....	County Agri. Agent .....	2,025.00
S. M. Salisbury .....	County Agri. Agent .....	2,766.66
J. P. Schmidt .....	County Agri. Agent .....	2,166.66
P. L. Sharritt .....	County Agri. Agent .....	2,208.33
C. R. Shumway .....	County Agri. Agent .....	2,591.66
E. C. Sleeth .....	County Agri. Agent .....	2,450.00
A. G. Smith .....	County Agri. Agent .....	2,425.00
W. E. Stone .....	County Agri. Agent .....	2,325.00
S. B. Stowe .....	County Agri. Agent .....	2,650.00
J. D. Van Houten .....	County Agri. Agent .....	2,025.00
C. J. Windau .....	County Agri. Agent .....	2,166.66
Robt. Wylie .....	County Agri. Agent .....	2,166.66
*O. H. Anderson .....	County Agri. Agent .....	1,316.66
*Geo. E. Boltz .....	County Agri. Agent .....	2,141.67

\*Part time.

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
Collis Jordan .....	County Agri. Agent .....	\$1,966.66
*F. G. Ketner .....	County Agri. Agent .....	2,400.00
*Chas. H. Kraatz .....	County Agri. Agent .....	1,433.33
Guy W. Miller .....	County Agri. Agent .....	2,166.66
*M. M. Phillips .....	County Agri. Agent .....	1,250.00
J. J. Riggle .....	County Agri. Agent .....	2,025.00
*R. A. Routsong .....	County Agri. Agent .....	1,716.66
*T. A. Wheeler .....	County Agri. Agent .....	1,583.33
*E. G. Hibbs .....	County Agri. Agent .....	383.33
*Wm. P. Brodie .....	County Agri. Agent .....	1,193.52
*E. A. French .....	County Agri. Agent .....	1,100.00
*R. W. Gardner .....	County Agri. Agent .....	1,000.00
*C. C. Lowe .....	County Agri. Agent .....	1,100.00
*G. K. Rule .....	County Agri. Agent .....	1,050.00
*R. W. Wells .....	County Agri. Agent .....	833.33
*M. V. Bailey .....	County Agri. Agent .....	916.00
*E. W. Hawkins .....	County Agri. Agent .....	1,000.00
*H. S. Lewis .....	County Agri. Agent .....	733.33
*F. S. Hagy .....	County Agri. Agent .....	833.33
*E. R. Raymond .....	County Agri. Agent .....	666.66
*H. L. Andrew .....	County Agri. Agent .....	1,000.00
*C. E. Rowland .....	County Agri. Agent .....	666.66
*E. E. Barnes .....	County Agri. Agent .....	1,100.00
*H. L. Andrew .....	County Agri. Agent .....	766.66
*H. P. Curtis .....	County Agri. Agent .....	1,100.00
*F. S. DeLashmutt .....	County Agri. Agent .....	1,533.33
*Paul Gerlaugh .....	County Agri. Agent .....	1,733.33
*Jean Gribble .....	County Agri. Agent .....	525.00
*M. E. Laird .....	County Agri. Agent .....	525.00
*W. E. McCoy .....	County Agri. Agent .....	1,562.50
*E. C. Richey .....	County Agri. Agent .....	1,650.00
H. G. Stevens .....	County Agri. Agent .....	2,000.00
*A. J. Swift .....	County Agri. Agent .....	1,466.66
*M. C. Thomas .....	County Agri. Agent .....	1,770.83
*H. J. Ridge .....	County Agri. Agent .....	1,466.66
*M. D. Miller .....	County Agri. Agent .....	1,000.00
*L. S. Van Natta .....	County Agri. Agent .....	1,500.00
*R. W. Jordan .....	County Agri. Agent .....	300.00
W. E. Hanger .....	Professor of Farm Crops .....	2,825.00
*V. C. Smith .....	Asst. Professor of Farm Crops .....	183.33
*Earl Chenault .....	Specialist—Farm Crops .....	600.00
Cecelia Ryan .....	Stenographer (½ Extension) .....	420.00
*Virgil Overholt .....	Asst. Professor of Agri. Engineering..	1,833.33
*James Green .....	Asst. Professor of Agri. Engineering..	1,666.66
*R. R. Thompson .....	Asst. Professor of Agri. Engineering..	833.33
Walter Pettit .....	Instructor in Agri. Engineering.....	1,800.00
*H. C. Ramsower .....	Professor Agri. Engineering .....	550.00
Aimee Obaugh .....	Stenographer (½ time Extension).....	420.00
L. P. Beechy .....	Asst. Professor of Veterinary Medicine	2,500.00
R. B. Cruickshank .....	Professor of Horticulture .....	2,825.00
F. H. Beach .....	Asst. Professor of Horticulture.....	2,325.00
John Wuichet .....	Professor of Animal Husbandry .....	2,500.00

\*Part time.



<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
*B. L. Thompson	Professor of Animal Husbandry	\$1,666.66
*A. B. Dann	Asst. Professor of Poultry Husbandry	216.66
*H. D. Munroe	Instructor in Poultry Husbandry	1,641.66
*E. L. Dakan	Asst. Professor of Poultry Husbandry	1,708.33
*N. W. Glines	Asst. Professor of Vegetable Gardening	625.00
*J. F. Barker	Professor of Soils	750.00
M. A. Bachtell	Professor of Soils	2,825.00
Robt. Dustman	Asst. Professor of Soils	2,566.66
*Geo. Valley	Assistant in Soils	1,200.00
Orletta Ansel	Stenographer ( $\frac{1}{2}$ time Extension)	420.00
T. H. Parks	Professor of Entomology	2,825.00
W. G. Stover	Asst. Professor of Plant Pathology	2,525.00
W. H. Palmer	State Leader of Boys' and Girls' Club Work	3,025.00
B. B. Spohn	Asst. State Leader of Boys' and Girls' Club Work	2,383.33
Hulda Horst	Asst. State Leader of Boys' and Girls' Club Work	1,783.33
H. E. Eswine	Asst. Professor of Agricultural Education	1,983.33
*O. C. Croy	Asst. State Leader of Boys' and Girls' Club Work	1,416.66
Catherine Ready	Stenographer	900.00
*Callie Veidt	Stenographer	375.00
*Martha Glover	Stenographer	455.00
*R. S. Noble	County Club Leader	500.00
*Davis Hill	County Club Leader	700.00
*R. B. Tom	County Club Leader	525.00
*H. H. Claypool	County Club Leader	500.00
*M. W. Brady	County Club Leader	525.00
*J. R. Allgyer	County Club Leader	479.25
*Florence Willison	Instructor in Home Economics	1,725.00
Edith Dickson	Instructor in Home Economics	1,680.00
Eloise Davison	Instructor in Home Economics	1,710.00
Wanda Przyluska	Instructor in Home Economics	2,400.00
*Ellen Miller	Instructor in Home Economics	1,500.00
*Elizabeth Shelow	Asst. Professor of Home Economics	1,050.00
Adelaide Scott	Assistant	1,200.00
Grace Linder (Part)	Instructor in Home Economics	850.00
*Mabel Nichol	Instructor in Home Economics	330.00
*Hazel Brown	Instructor in Home Economics	990.00
O. Erf (Part)	Professor of Dairying	3,500.00
Ivan McKellip	Professor of Dairying	2,700.00
*W. D. Axtell	Instructor in Dairying	1,400.00
Beulah Allen	Clerk	840.00
R. F. Taber	Asst. Professor of Rural Economics	2,508.33
*C. R. Arnold	Instructor in Rural Economics	825.00
*L. O. Lantis	Asst. Professor of Rural Economics	733.33
Marie Hoffman (Part)	Stenographer	420.00
*Edna Pugh	Stenographer	712.50
F. L. Allen	Supervisor of Farmers' Institutes	2,883.33
Blanche Clark	Secretary of Farmers' Institutes	1,080.00
*Edna N. White	Head of Home Economics	1,750.00

\*Part time.

<i>Name of Employee</i>	<i>Position</i>	<i>Salary</i>
Faith Lannan .....	State Leader of Home Demonstration Agents .....	\$2,925.00
Lulu Billman .....	Asst. State Leader of Home Demonstration Agents .....	2,083.33
*Mary Brown .....	Home Demonstration Agent .....	1,200.00
*Edith Hutchison .....	Home Demonstration Agent .....	1,500.00
*Marion Current .....	Home Demonstration Agent .....	825.00
*Ruth Beach .....	Home Demonstration Agent .....	900.00
*Mary Field .....	Home Demonstration Agent .....	1,425.00
*Matilda Campbell .....	Home Demonstration Agent .....	1,500.00
*Blanche Bowers .....	Home Demonstration Agent .....	900.00
*Z. B. Wallin .....	Asst. Professor of Marketing.....	500.00

\*Part time.



## APPENDIX IV

## THE WORK OF INSTRUCTORS—1919-1920

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
<b>AGRICULTURE, CHEMISTRY AND SOILS</b>						
General Agricultural Chemistry.....	103	5	150			
General Agricultural Chemistry.....	115	3	4			
Dairy Chemistry.....	107	3-5	14	108	3-5	11
Chemistry of Animal Nutrition.....	111	2-4	11	112	2-4	7
Plant Chemistry.....				114	2	4
Plant Chemistry.....				116	2	2
Food Analysis.....	121	3-5	9	122	3-5	7
Household Chemistry.....	124	4	49	123	4	65
Chemistry of Food and Nutrition.....	125	4	12	126	4	9
Research in Chemistry.....	201		1	202		1
Applications of Chemistry.....	51	4	117	52	4	135
Winter Course.....			101			
Elementary Soils.....	53	3	49	54	3	47
Elementary Soils.....				152	5	151
Soil Fertility.....	153	2	21	154	2	17
Chemical Analysis of Soils.....	155	3	5	156	3	4
Origin and Classification of Soils.....	157	3	4			
Chemistry of Fertilizers.....	161	1-4	2	162	1-4	1
Research in Soils.....	201		7	202		6
Seminary in Soils.....	203		7	204		4
<b>AGRICULTURAL EDUCATION</b>						
Method of Teaching Vocational Agriculture in High Schools (Stewart).....	101	3	7	101	3	7
Observation and Supervised Teaching (Johnson).....	103	22	11	103	2	1
Observation and Supervised Teaching (Johnson).....	104	2	7	104	2	7
<b>AGRICULTURAL ENGINEERING</b>						
Farm Engineering.....	101	4	44	101	4	75
Farm Structures.....	103	3	25			
Drainage.....	106	3	4	106	3	28
Farm Power.....				107	4	47
Concrete Construction.....				108	3	10
Advanced Farm Machinery.....	110	3	17			
Special Problems.....	111	2-6	9	112	2-6	12
Farm Structures (3 yr. Agr.).....	51	4	67	51	4	98
Farm Structures (Vocational Board Students).....				51	4	14
Farm Machinery (3 yr. Agr.).....	52	4	28	52	4	61
Farm Machinery (Vocational Board Students).....				52	4	34
Concrete Construction (3 yr. Agr.).....	53	3	6	53	3	28
Farm Power (3 yr. Agr.).....	54	4	11			
Farm Machinery (Winter Course).....			88			
<b>AMERICAN HISTORY</b>						
History of the United States (1763-1829)....	101	3	711	101	3	103
History of the United States (1829-1918)....	102	3	72	102	3	587
Formation of the Constitution.....	107	2	12			

## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Constitutional History of the United States.....				108	3	16
Early Political Parties in the United States..	109	2	13			
Political Parties in the U. S. (1852-1920).....				110	2	18
American Diplomacy to close of Civil War..	113	3	10			
Problems of Amer. Diplomacy since Civil War				114	3	12
History of Canada.....				119	2	15
Methods of Teaching American History.....	121	2	11			
Recent History of the U. S. (1870-1919).....	123	3	26	124	3	21
Colonial Period of Latin America.....	125	2	4			
History of the Latin American Republics.....				126	2	3
Graduate Seminary in American History.....	205	2	6	206	2	4
ANATOMY						
Comparative Anatomy.....	101	3-5	9	102	3-5	9
Comparative Embryology.....	103	3-5	9	104	3-5	9
Visceral Anatomy (Science Nursery).....	116			116	3	3
Comparative Anatomy (Premedical).....				118	3	200
Human Anatomy (Gross) Med.....	121	6	68	122	4	60
Applied Human Anatomy Med.....	127	3	40			
Histology Embryology.....	133	6	68	134	4	60
Neurology Med.....				136	4	60
Human Analogy Dental.....	125	4	34	126	4	30
Applied Human Anat. Dental.....				131	2	18
Histology Dental.....	139	3	35	140	2	32
Embryology Dental.....				154	1	30
Anatomy of Eye App. Optics.....	145	4	5			
Histology Embryology.....	143	5	30	144	4	28
Comparative Anat. Dental.....				102	3	80
ANIMAL HUSBANDRY						
Elementary Live Stock Judging.....	135	4	80	135	4	50
Principles of Feeding.....	137	3	64	137	3	55
Horse Production and Management.....	139	3	24			
Beef Cattle Production and Management.....	141	3	26			
Swine Production and Management.....				143	3	60
Dairy Cattle Production and Management.....				145	3	28
Sheep Production and Management.....				147	3	26
Advanced Live Stock Judging.....	151	3	13			
Meats and Meat Products.....				153	3	11
Live Stock Markets and Marketing.....	155	3	15			
Animal Genetics.....				157	4	28
Herd Book Study.....				161	2	1
Research and Thesis.....	163	2-5	1	164	2-5	6
Poultry Husbandry.....	117	3	20	118	3	10
Poultry Culture.....				121	1	12
Incubator Practice.....				122	1	14
Types and Breeds of Live Stock.....				132	3	8
Research.....				202	5	3
Types and Breeds of Live Stock.....	51	4	98	52	4	74
Feeding.....	54	4		54	4	48
Breeding Live Stock.....				56	4	10
Live Stock Management.....	57	4	48			
Poultry Husbandry.....	59	3	18	60	3	14



## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
<b>VOCATIONAL STUDENTS</b>						
<b>FEDERAL BOARD</b>						
Live Stock Management .....				57	4	50
Elementary Judging .....				52	4	42
Feeding .....				54	4	45
Poultry Husbandry .....				60	4	3
<b>WINTER COURSE STUDENTS</b>						
Animal Breeding .....	69					
Feeding .....	69					
Judging .....	69					
<b>APPLIED OPTICS</b>						
Theoretical Optics .....	107	4	5	108	5	4
Mechanical Optics .....				110	4	1
Theoretical Applied Optics .....				112	4	1
Mechanical Optics .....	129	1	8			
Theoretical Applied Optics .....	133	6	8	134	6	8
Optics Clinical Practice .....	147	3	8	148	3	8
<b>ARCHITECTURE</b>						
Photography .....	111	2	48	111	2	39
Composition .....	113	2	27			
Professional Practice .....				116	4	14
Plumbing .....	117	2	14			
Thesis .....	118	5	1	118	5	11
Photography .....				122	2	6
Fire Protection .....				123	2	2
Shades, Shadows and Perspective .....				124	3	20
Elements of Architecture .....	131	2	57			
Elements of Architecture .....				132	2	48
History of Architecture .....	133	3	34			
History of Architecture .....				134	3	28
History of Architecture .....	135	2	22			
History of Architecture .....				136	3	13
Design .....	141	5	16	141	5	1
Design .....	142	5	4	142	5	13
Design .....	143	5	9	143	5	4
Design .....	144	5	3	144	5	8
Design .....	145	5	7		5	2
Design .....				146	5	6
Ornament .....	147	4	8			
Design .....	146	5	2	150	5	21
Masonry .....	151	3	15			
Plumbing .....	153	2	4			
Design .....				Specd.	5	1
<b>ART</b>						
The Theory and Practice of Teaching Art .....	117	3	1			
Appreciation of Art .....	119	1	191	119		191

## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Costume Design .....	121	2	27	121		14
Elementary Drawing .....	131	2	184	131		56
Elementary Drawing .....	132	2	7			57
Advanced Drawing .....	133	2	20			7
Drawing from Life .....	134	3	2	134		6
Illustrative Drawing .....	135	4				4
Water Color Painting .....	136	2	18			4
Advanced Water Color .....				137	3	4
Oil Painting .....	138	3	2	138		1
Advanced Oil Painting .....				139	3	1
Elementary Design .....	141	2	29			121
Advanced Design .....	142	3	3	142		5
Specialized Design .....				143	3	2
Commercial Design .....				144	3	1
Design Thesis Work .....				145	3	
History of Classic Art .....	151	3	21	151		6
History of Medieval Art .....				252	3	14
History of Renaissance and Modern Art .....	153	3	5			
Greek Sculpture (not given) .....	154	2				
The Italian Schools of Painting (not given) .....				155	2	
The Netherlandish Schools of Painting (not given) .....				156	2	
Art of China and Japan .....	157	3	3			
Thesis in Art History (not given) .....				158	5	
Modern Painting and Sculpture (not given) .....				160	3	
Water Color (Architects) .....				162	2	14
Life Drawing (Architects) .....	163	2	12			
Life Drawing (Architects) .....				164	2	10
ASTRONOMY						
General Astronomy .....	101	3	89	102	3	67
Astronomy Geodesy and Least Squares .....	104	3	33	105	3	29
Celestial Mechanics .....	111	3	1	112	3	1
BACTERIOLOGY						
General Bacteriology .....	107	4	137			
Immunity and Serum Therapy .....	117	2	28	118	2-4	50
Pathogenic Protozoa .....				120	2	7
Special Problems .....	125	5	8	126	5	8
Veterinary Bacteriology .....	131	4	17	132	4	25
Medical Bacteriology .....	141	6	23			
Advanced Research (Ph. D.) .....	201		1	202		1
Bacteriology for Pharmacy Students .....				102	2	22
Pathogenic Bacteriology .....				108	2-5	66
Dairy Bacteriology .....				110	2-4	16
Soil Bacteriology .....				112	4	3
Water Bacteriology .....				114	2-4	13
Dental Bacteriology .....				150	4	26
Total .....			214			237
BIBLIOGRAPHY						
Agricultural Bibliography .....	103	½	61			



## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Bibliography of Social Sciences . . . . .	105	2	23	105	2	27
Library and School . . . . .	101	1	4	102	1	6
BOTANY						
General Botany . . . . .	101	3	580			
General Botany . . . . .				102	3	382
Plant Histology . . . . .	107	2	3			
General Dendrology . . . . .	110	2	4			
Plant Ecology . . . . .	117	3	8			
Plant Ecology . . . . .				118	3	8
Plant Genetics . . . . .	121	3	1			
Morphology of Lower Plants . . . . .	123	4	6			
Morphology of Vascular Plants . . . . .				124	4	6
Plant Physiology . . . . .	125	4	26			
Plant Physiology . . . . .				126	4	23
Minor Investigations . . . . .	133	3-5	8			
Minor Investigations . . . . .				134	3-5	12
Evolution of Plants . . . . .	135	1	3			
Evolution of Plants . . . . .				136	1	2
Dendrology of Conifers . . . . .				142	2	4
Plant Micro-Chemistry . . . . .	151	3	10			
Research in Systematic Botany . . . . .	201	3-10	1			
Research in Systematic Botany . . . . .				202	3-10	1
Research in Physiology and Ecology . . . . .	205	4-10	2			
Research in Physiology and Ecology . . . . .				206	4-10	2
Seminary in Botany . . . . .	209	1	1	210	1	1
Dissertation . . . . .			1			1
Thesis . . . . .			2			2
CERAMIC ENGINEERING						
Drying and Burning . . . . .	143	3	13			
Drawing . . . . .	113	5	11			
Origin and Properties of Clays . . . . .	141	3	15			
Laboratory Work in Ceramics . . . . .	111	5	11			
Ceramic Calculations . . . . .	105	2	15			
Clay Wares and their Manufacture . . . . .				142	3	18
Drawing . . . . .				114	5	11
Glazing and Decoration of Clay . . . . .				144	3	10
Laboratory Work in Ceramics . . . . .				112	5	10
Thesis . . . . .				116	4	10
Physical-Chemical Measurements of Clay . . . . .				108	3	10
Ceramic Analysis . . . . .	101	4	12			
Ceramic Analysis . . . . .				102	4	12
Research Work . . . . .	201	5	1			
Research Work . . . . .				202	3	1
Porcelain for Electrical and Special Purposes . . . . .	205	2	1	206	2	1
Advanced Experimental Work . . . . .				208	5	1
CHEMISTRY						
Elementary Chemistry . . . . .	105	4	959	105	4	91
Elementary Chemistry and Qualitative Anal. . . . .	106	4	91	106	4	752
General Chemistry . . . . .	109	4	851	109	4	49

## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
General Chemistry and Qualitative Analysis	110	4	95	110	4	680
Advanced General Chemistry	113	2	122	114	2	89
Qualitative Analysis	117	3	11			
Quantitative Analysis	119	3	119	120	4	97
Chemical Problems				124	1	83
Organic Chemistry	127	4	83			
Teaching of Chemistry (Not given this year)				132	2	
Reading of Chemical Literature				136	2	25
Thesis				140	4	22
Organic Chemistry	150	5	163			
Organic Chemistry	151	2	89	152	2	72
Organic Chemistry	153	2 or 3	81	154	2 or 3	41
Quantitative Organic Chemistry	155	2	20	156	2	17
Physical Chemistry	157	3	58	158	3	61
Physical Chemistry	159	3	13			
Physical Chemistry	161	2 or 3	8	162	2 or 3	9
Quantitative Analysis (Not given this year)	165	2				
Special Methods of Analysis (Not given this year)	167	3 to 5				
Qualitative Analysis				168	3 to 5	29
Qualitative Analysis (Not given this year)	169	3 to 5				
Water Analysis				176	3	21
Industrial Chemistry	177	2	57	178	1	50
Industrial Inspection Trip				182		25
Written Reports				184		1
Industrial Chemistry	185	2	50	186	3	40
Inorganic Preparations	187	3	22	187	3	18
Rare Elements (Not given this year)				192	2	
Applied Electro-Chemistry (Not given this year)				194	2	
Inorganic Chemistry				196	2	19
Physical Chemistry	201	3	5	202	3	6
CHEMISTRY						
Organic Chemistry	205	2-3	15	206	2-3	11
Inorganic Preparations (Not given this year)	209	3		210	3	
Historical Chemistry (Not given this year)	213	2				
Seminary in Organic Chemistry	215	2	13	216	(not given)	
Seminary in Organic Chemistry (Not given this year)	217	2				
Seminary in Organic Chemistry				218	2	12
Seminary in Inorganic Chemistry	221	2	11			
Seminary in Physical Chemistry (Not given this year)				224	2	
Seminary in Advanced Industrial Chemistry	225	2	6	226	2	8
Scientific Foundations of Analytical Chemistry	227	2	(not given)			
Research	235	5-10	25	236	5-10	29
Seminary in Analytical Chemistry	239	2	8			
Special Physical				Spcl.	2	48
CIVIL ENGINEERING						
Land Surveying	101	4	54			



## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Field Practice.....	101a	1	54			
Topographic Drawing.....	103	2	48			
Summer Surveying Camp (104 and 111).....		4	17			
Topographic Surveying.....	105	3	39			
Applied Descriptive Geometry.....	107	2	35			
Sanitary Engineering.....	109	3	38			
Bridge Design.....	113	4	33			
Masonry Construction.....	115	3	35			
Thesis.....	119	1	36			
Trusses.....	124	3	27			
Tall Buildings.....	125	3	27			
Municipal Engineering.....	139	3	4			
Railroad Surveying.....				102	4	52
Field Practice.....				102a	1	48
Roads and Pavements.....				106	3	43
Timber Construction.....				108	3	67
Stresses in Structures.....				110	4	33
Railway Location.....				112	4	23
Advanced Bridge Design.....				114	4	7
Masonry Structures and Contracts.....				116	3	35
Water Supply.....				117	3	29
Cement and Concrete.....				130	2	14
Thesis.....				122	3	39
Trusses.....				124	3	37
Timber and Masonry.....				126	2	67
Plane Surveying.....				128	2	66
Reinforced Concrete Design.....				129	3	38
Engineering Reports.....				138	1	4
Sanitary and Water Supply Design.....				140	3	3
Cement and Concrete.....				118	3	7
DAIRYING						
Principles of Dairying.....	101	4	60	101	4	36
Farm Dairying.....				102	4	19
City Milk Supply.....	103	2-4	8	104	2-4	12
Buttermaking.....	105	4	13	105	4	5
Cheesemaking.....	107	3	5	107	3	6
Ice Cream Making.....	110	2	8	110	2	8
Advanced Dairying.....	113	2	10	114	2	8
Dairy Buildings.....	115	2	7			
Milk Condensing.....				116	2	16
Proseminary.....	119	1	1	120	1	1
Advanced Dairying.....	201		2	202		1
Elementary Dairying.....	52	3	88	52	3	68
Dairy Production and Manufacturing.....	53	3	46	53	3	29
Dairy Farm Management.....	57	3	8	58	3	5
DENTISTRY						
Prosthesis (Prosthetic Dentistry).....	101	4	98	102	5	90
Prosthesis (Dental Metallurgy).....	132	1	20			
Prosthesis (Prosthetic Dentistry).....	103	1	20	104	2	21
Prosthesis (Crown and Bridge Technic).....	105	1	20	106	1	20
Prosthesis (Crown and Bridge Work) (Practice).....	107	8	19	112	3	19

## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Prosthesis (Prosthetic Dentistry Practice)...	117	2	19	118	2	19
Prosthesis (Crown and Bridge Practice)....	115	2	28	116	2	28
Prosthesis (Prosthetic Dentistry Practice)...	119	2	29	120	2	29
Operative (Dental Anatomy Technic).....				145	3	90
Operative (Operative Technic).....	109	2	20	110	2	20
Operative (Dental Medicine).....	131	1	19	132	2	19
Operative (Oral Hygiene).....	135	3	19			
Operative (X-Ray) (Principles, Prac. Exodontia).....	125	3	19	126	3	19
Operative (Orthodontia Princ. Technic)....				118	2	19
Operative (Porcelain Technic).....				114	1	19
Operative (Anesthetics).....	139	2	27	140	2	27
Operative (Ethics, Econ. Hist. Jurisp.)....	141	1	28	142	1	28
Operative (Dental Medicine).....	133	2	27	134	2	27
Operative (Oral Surgery).....	137	2	27	138	2	27
Operative (Principles and Practice).....	127	5	29	128	6	28
Operative (Orthodontia Prin. and Prac.)....	121	2	27	122	1	27
ELECTRICAL ENGINEERING						
Electrical Engineering.....	101	5	63			
Electrical Engineering.....	103	3	33	103	3	1
Direct Current Machinery.....				104	5	48
Applications of Electricity.....				106	1½	47
Alternating Current Circuits and Machinery				108	1½	47
Alternating Current Machinery.....	109	3	20			
Alternating Current Laboratory.....	111	3	19			
Advanced Alternating Current Laboratory...				112	3	19
Electric Railways.....	113	2	12			
Telephony.....	115	3	9			
Electric Illumination.....	117	2	25			
Wireless Telegraphy.....	119	2	1			
Electrical Design.....	121	3	19			
Electrical Transmission and Distribution...				124	3	22
Special Reading and Laboratory.....	125a	3	1	126a	5	1
Special Reading and Laboratory.....				126b	5	1
Special Reading and Laboratory.....	125b	1	8	126c	3	4
Thesis.....	127	1	19	128	5	19
Advanced Electrical Design.....				122	2	7
Inspection Trip, Senior.....				130		17
Inspection Trip, Junior.....				131		43
Reading Course.....				134		3
Transient Electric Phenomena.....				203	2	1
Research Work.....				207	3	1
ENGINEERING DRAWING						
Elementary Mechanical Drawing (Eng. and Dents).....	101	2	855			
Elementary Mechanical Drawing.....				101	2	45
Mechanical Drawing.....	102	3	49			
Mechanical Drawing.....				102	3	617
Descriptive Geometry.....	103	3	219			
Descriptive Geometry.....				103	3	50
Descriptive Geometry.....	105	3	39			



## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Descriptive Geometry .....	107	3	16			
Machine Drawing .....				104	3	136
Advanced Descriptive Geometry .....				106	3	43
Technical Drawing .....				110	2	53
Technical Drawing .....	111	2	96			
Technical Drawing .....	121	2	29			
Technical Drawing .....				122	2	20
Mechanical Drawing (Ags.) .....	125	2	148			
Mechanical Drawing (Ags.) .....				122	2	133
Mechanical Drawing (Home Ec.) .....	127	1½	64			
House Planning (Home Ec.) .....				128	1½	62
Elementary Drawing (Pharm.) .....	129	1	11			
Free-hand Lettering and Technical Sketching (Pharm.) .....				130	2	11
The Teaching of Mechanical Drawing....	131	3	13	132	3	8
Drawing of Manual Arts Teachers .....	139	4	4	140	3	4
Grand Total .....			1543			1182
ENGLISH						
Paragraph Writing: Description and Narration	101	2	2535	101	2	212
Paragraph Writing: Exposit'n and Argum'tat'n	104	2	177	104	2	2337
Descriptive and Narrative Writing .....	105	2	53			
Expository Writing .....				106	2	48
Advanced Composition .....	107	2	41	108	2	53
History of the English Language .....	127	2	123			
English Words .....				128	2	238
American Literature .....	133	3	248	133	3	227
Nineteenth Century Poetry .....	141	3	264	142	3	274
Nineteenth Century Prose .....	145	3	187	146	3	197
Old and Middle English .....	151	3	13	152	3	6
The Novel .....	155	3	35	156	3	48
Versification .....	157	3	10			
The Short Story .....				158	3	26
Milton and his Contemporaries .....	159	2	20			
The Age of Dryden .....				160	2	20
Eighteenth Century Poetry and Prose .....				136	3	8
The Life and Times of Dr. Johnson .....	137	3	13			
Shakespeare .....	167	3	70	168	3	83
Modern English Drama .....	169	3	35	170	3	45
The Teaching of English .....	181	2	46			
History of the Short Narrative in English...	201	2	7			
The Lyric .....				202	2	5
The College Teaching of English .....				204	2	19
History of Critical Theory .....	205	2	8			
The Later Novel .....	207	2	7			
The Later Poetry .....				208	2	11
English and Scottish Popular Ballads .....	209	2	5			
The Celtic Renaissance .....				212	2	6
The Technique of the Drama .....	213	2	23	214	2	23
Studies in Eighteenth Century Literature...	217	2	2	218	2	2
Discussion of Dissertations .....	219	2	10	220	2	11
Total English Literature and Rhetoric .....			2932			3899

## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
<b>ENGLISH</b>						
Public Speaking .....	101	2	181			
Debating .....				102	2	121
Advanced Argumentation and Debate .....	107	2	11	108	3	8
Advanced Debate Practice .....				110	2	8
Extempore Speaking .....				114	2	8
Masters of Public Address .....	121	2	8	122	2	3
The Forms of Public Address .....	125	2	10	126	2	8
Total Public Speaking .....			210			156
Total English Literature and Rhetoric .....			3932			3899
Total in Department .....			4142			4055
<b>EUROPEAN HISTORY</b>						
Medieval History .....	101	3	467			
Medieval History .....				101	3	81
Modern History from 1500 A. D. ....				102	3	328
History of England .....	103	3	62	104	3	63
History of Greece .....	105	3	20			
History of Rome .....				106	3	30
Medieval Civilization .....	107	2	12	108	2	9
The Age of the Renaissance, 1250 to 1500 A. D. ....	109	2	20			
The Period of the Reformation .....				110	2	18
Constitutional History of England .....	113	3	10	114	3	8
Europe and Africa, India and Australia .....	115	2	10			
Europe and Turkey: The Eastern Question .....				116	2	12
History of France .....	121	2	38	122	2	29
History of the Church in Western Europe .....	125	2	11	126	2	4
Historical Literature and Method .....	129	2	5	130	2	4
The World War; its Causes, Issues and Results .....	131	3	75	132	3	75
Europe from 1815 to 1919 .....	123	3	21	124	3	15
Teaching of European History .....				152	2	13
Seminary in Modern European History .....	203	2	6	204	2	6
<b>FARM CROPS</b>						
Field Crops Production .....	101	4	76	101	4	36
Cereal Crops .....	109	3	14			
Forage Crops .....				111	3	11
Special Crops .....				112	2	8
Plant Breeding .....				113	3	4
Minor Investigation .....	119	2	3	120	2	4
Research .....	201	5-10	2	202	5-10	2
Seminary .....	203	1	5	204	1	3
Crop Production .....	51	4	86	52	4	83
Farm Crops (Special Course for Federal Board for Vocational Training) .....	51	4	42	52	4	53
Farm Crops (8 Weeks Course) .....			110			
Dairy Farm Crops (4 Weeks Course) .....			40			
<b>GEOLOGY</b>						
Physiography (2 sections) .....	101	3	149	102	3	134
Physiography (2 sections) .....	102	3	142	101	3	152



## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Inorganic Geology .....	103	3	41			
Historical Geology .....				104	3	35
Field Geology .....	105	3	4			
Glacial Geology .....				106	3	6
Invertebrate Paleontology .....	107	3	6	108	3	6
Physiographic Geology .....	116	3	2			
Minor Investigations .....	141	3	1	142	3	2
Geology (Agriculture) { 5 sections 1st Sem. . .	151	3	149	151	3	141
{ 4 sections 2nd Sem. . .						
Geology (Engineers, 2 sections first Sem.) ..	168	3	48	168	3	17
Geology (Mining Engineers) .....				165	3	9
Petrography .....				166	3	8
Economic Geology .....	167	3	10	170	3	5
Introduction to Geography .....	121	3	6			
Geography of North America .....				122	3	6
The Teaching of Geography .....				128	3	22
Meteorology .....				101	2	16
GERMAN						
Elementary German .....	101	4	79	101	4	18
Elementary German .....	102	4	14	102	4	63
Intermediate German .....	103	4	75	103	4	24
Easy Classics Reading and Composition ...	104	4		104	4	19
Science Reading .....	106	4	11	106	4	47
Advanced German .....	107	4	15	107	4	
Advanced German .....	108	4		108	4	17
Schiller .....	117	2	2	117	2	
Schiller .....	118	2		118	2	3
Conversations and Compositions .....	131	2	6	131	2	
Conversations and Compositions .....	132	2		132	2	4
Heine .....	159	2	6	159	2	
Faust .....	152	3		152	3	8
Total .....			208			203
GREEK						
Elementary Greek .....	101	4	10	102	4	4
Plato. ....	125	4	2	126	4	2
Readings in Greek Philosophy .....	119	2	2	120	2	1
Epic Poetry .....	113	2	1	114	2	1
Greek Art .....	115	2	10	116	2	7
Greek Literature .....	123	2	6	124	2	6
HISTORY AND PHILOSOPHY OF EDUCATION						
History of Education .....	101	3	114	102	3	101
History of Education .....	102	3	7	101	3	13
Comparative Education .....	107	2	2	108	2	4
History of Education in the United States. .	109	2	2			
Educational Classics .....	105	2	4			
HOME ECONOMICS						
Foods .....	101	5	86	102	5	80

## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Sanitation .....	104	3	18	104	3	49
Teaching of Home Economics .....				108	2	17
Textiles .....	111	2	153	112	2	133
Dress .....	113	3	19	113	3	10
Dress .....				116	3	15
House .....	118	3	41	118	3	45
House .....	119	3	12	119	3	53
Food Problems .....	121	3	23			
Practice Teaching in Home Economics .....	123	2	11	124	2	10
Proseminary .....	105	2-5	29	105	2-5	16
Proseminary (Not offer) .....	106					
Dietetics .....				110	4	48
HOMOEOPATHIC MEDICINE						
Materia Medica .....	101	1	7	102	1	7
Materia Medica .....	103	1	8	104	1	8
Materia Medica .....	105	3	11	106	3	11
Materia Medica .....				110	2	8
Clinical Diagnosis .....				102	2	8
Surgery .....	101	2	8			
Clinical Diagnosis .....	103	4	11	104	4	11
Clinical Diagnosis .....	107	1	11	108	5	11
Clinical Diagnosis .....	109	1	11	110	1	11
Eye, Ear, Nose and Throat .....	105	2	10	106	2	10
Gynecology .....	105	3	11			
Obstetrics .....				106	3	11
Internal Medicine .....	105	4	11	106	4	11
Internal Medicine .....	115	2	11	116	2	11
Surgery .....	105	3	11	106	3	11
Eye, Ear, Nose and Throat .....	107	4	1	108	4	1
Internal Medicine .....	123	1	1	124	1	1
HORTICULTURE						
Pomology .....	105	4	19	106	4	12
Experimental Horticulture .....	109	3	10	110	3	12
Farm Horticulture .....	118	4	34	118	4	80
Systematic Pomology .....	121	4	9	122	4	12
Vegetable Gardening, Commercial .....	103	4	11	104	4	8
Systematic Vegetable Gardening .....	131	4	4			
Greenhouse Construction and Management .....				132	4	6
Horticulture Products .....	133	3	8			
Principles of Horticulture .....	101	4	20			
Small Fruits and Grapes .....				120	4	14
Garden Flowers .....	145	3	3			
Plant Variations .....	107	3	6			
Commercial Floriculture .....	141	4	3	142	4	4
The Flower Shop .....				143	3	8
Systematic Floriculture .....	147	3	2	148	3	2
Plant Materials .....	151	2	6	152	2	6
Design .....	157	3	5	158	3	4
Advanced Design .....	159	4	1	160	4	1
Special Problems .....	169	3	3	170	3	2
History of Landscape Architecture .....				154	3	5



## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Preliminary Design.....				150	3	4
Landscape Architecture.....				156	2	12
Landscape Engineering.....				166	3	2
Civic Design.....				165	3	1
Horticulture Plant forms.....	51	4	9	52	4	9
Principles of Horticulture.....	53	4	115	54	4	96
Pomology.....	57	4	9	58	4	1
Landscape Gardening.....	60	4	2			
Floriculture.....	65	3	2			
Special Floriculture.....	60	2	2	61	2	2
Floriculture.....				66	3	5
Eight Weeks, Pomology.....		4	20			
Eight Weeks, Vegetable Gardening.....		4	12			

COURSE SUBJECT	SUMMER SESSION			FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
INDUSTRIAL ARTS									
Carpentry.....				101	2	159	101	2	123
Forging.....				103	2	145	103	2	141
Foundry Work.....	105	2	5	105	2	35	105	2	16
Chipping and Filing.....	107	2	14	107	2	25	107	2	5
Joinery and Pattern Making.....	109	2	56	109	2	53	109	2	32
Advanced Pattern Making.....	111	1	4	111	1	33	111	1	16
Forging.....	115	2	64	115	2	46	115	2	14
Machine Work.....	119	3	7	119	3	53	119	3	50
Advanced Machine Work.....	121	3	12	121	3	33	121	3	37
Advanced Machine Work.....				123	2	2	123	2	5
Toolmaking and Jig Work.....				127	3		127	3	1
Carpentry.....				51	2	58	51	2	45
Forging.....				52	2	58	52	2	49
Total.....			162			700			534

Note that the work of the Summer Session has been added to this report. The Instructors here are on an eleven months' basis and are not on the Summer Session Budget. Hence the students handled during the summer should be credited to this Department—not to the Summer School. The reports heretofore published, are, as affecting the cost of instruction or work of Instructors in this department, misleading.

## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
<b>INDUSTRIAL EDUCATION</b>						
Teaching of Manual Training.....	111	3	2			
Materials, Methods and Equipment.....				112	3	3
Construction Design.....	117	2	4			
Construction Design.....				117	2	2
Construction Design.....				118	2	2
Handiwork for Supervisors.....	121	2	14			
Handiwork for Supervisors.....				121	2	1
Handiwork for Supervisors.....				122	2	20
Elementary Woodwork.....				125	2	1
Wood Turning and Pattern Making.....	127	3	5			
Wood Turning and Pattern Making.....	128	3	1			
Wood Turning and Pattern Making.....				128	3	6
Cabinet Making.....	129	2	1			
Cabinet Making.....				129	2	2
Advanced Cabinet Making.....	131	3	2			
Advanced Cabinet Making.....				131	3	1
<b>JOURNALISM</b>						
News Collecting and News Writing (2 Sec.)..	101	3	73	102	3	53
News Collecting and News Writing.....	102	3	10			
News Collecting and News Writing.....				101	3	27
Newspaper Practice and News Writing.....	105	3	21	106	3	21
Newspaper Problems.....	109	2	5	110	6	6
Newspaper Ethics and Principles.....	113	2	15			
Newspaper Law.....				119	2	25
Newspaper History and Comparative Journalism.....	103	3	16			
Newspaper Organization and Mechanics.....				104	3	25
The Country Weekly.....	115	2	5			
The Country Weekly—Advertising Principles.....				116	2	13
Editorial Writing and News Interpretation..	107	3	8	108	3	7
<b>LATIN</b>						
Cicero, Livy, Horace, Aulus, Gillius.....	101	4	30	102	4	22
Pliny or Cicero; Cattelul or Tacitus: Latin Comedy.....	103	3	9	104	3	9
Roman Satire; Roman Philosophy and Rhetoric.....	105	2	2	106	2	2
Roman Private Life.....	107	1	3	108	1	8
Roman Art and Archaeology.....	109	2	3	110	2	2
Roman and Comparative Literature.....	111	1	10	112	1	8
Proseminary.....	113	3	2	114	3	2
Latin Prose Composition.....	115	3	4	116	3	1
Roman Prose Authors.....	121	2	6	122	2	6
Historical Latin Grammar, Sounds and Inflections.....	123	1	3	124	1	3
Historical Latin Grammar, Syntax.....	125	1	2	126	1	2
Methods and Reading at Sight.....	129	2	8	130	2	6
Elementary Latin, Caesar.....	147	4	18	148	4	10
Cicero (Orations); Virgil (Aeneid).....	149	4	10	150	4	6
Roman Religion.....	201	1	1			
Elements of Latin Epigraphy.....	213	2	1	214	2	1

Note: The total number of students in the department has been ten percent greater than last year.



## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
COLLEGE OF LAW						
JOHN J. ADAMS—						
Code Pleading.....		3	30			
Evidence.....		2	22		2	29
Practice.....		2	19		2	19
Judgments.....		2	15			
Bankruptcy.....		1	11			
Public Corporations.....		1			2	16
Ohio Appellate Practice.....					1	8
Agency.....					2	84
Legal Ethics.....		5	Lec.			16
ALONZO H. TUTTLE—						
Torts.....		3	85		3	83
Constitutional Law.....		3	21		2	13
Partnership.....					2	30
Damages.....		2	17			
Criminal Law.....		3	87			
GEORGE W. RIGHTMIRE—						
Contracts.....		3	79		3	87
Carriers.....		2	19			
Negotiable Instruments.....		3	21			
Bailments.....					2	83
Suretyship.....					2	15
Sales.....					2	33
CLARENCE D. LAYLIN—						
Equity I.....	I	2	27			
Quasi Contracts.....		2	8			
Private Corporations.....		2	17			
Equity III.....	III	2	6			
Criminal Procedure.....		1	10			
Domestic Relations.....					2	78
Equity II.....	II				2	32
Private Corporations.....					2	15
Conflict of Laws.....					2	5
J. W. MADDEN—						
Property V.....		2	11			
Property III.....		2	24			
Property I.....		2	88			
Common Law Pleading.....		2	86			
Property VI.....					2	18
Property IV.....					2	21
Mortgages.....					2	30
Trusts.....					2	11
Property II.....					2	79
MATHEMATICS						
Mathematics for Students in Agriculture....	107	3	113	107	3	123
College Algebra and Plane Trigonometry....	121	3	267			
Analytic Geometry and Calculus.....	127	3	22			

## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Mathematics of Finance and Insurance.....	129	3	73			
College Algebra and Plane Trigonometry.....	131	5	746			
Plane Trigonometry and Analytic Geometry.....	132	5	88			
Differential Calculus.....	141	5	248			
Integral Calculus.....	142	5	55			
Modern Elementary Geometry.....	149	3	3			
Differential Equations.....	151	1	54			
Plane and Solid Analytic Geometry.....	163	3	5			
Advanced Calculus.....	165	3	6			
Differential Equations.....	167	3	13			
Modern Higher Algebra.....	173	3	8			
Actuarial Theory.....	183	2	1			
Theory of Functions of a Complex Variable.....	201	3	2			
Total.....			1704			
Plane Trigonometry and Analytic Geometry.....				122	3	152
Analytic Geometry and Calculus.....				128	3	12
Mathematics of Finance and Insurance.....				130	3	61
College Algebra and Plane Trigonometry.....				131	5	100
Plane Trigonometry and Analytic Geometry.....				132	5	637
Differential Calculus.....				141	5	81
Integral Calculus.....				142	5	248
Plane and Solid Analytic Geometry.....				164	3	7
Differential Equations.....				168	3	11
Modern Higher Algebra.....				174	3	5
Teaching of Mathematics.....				186	2	14
Theory of Functions of a Complex Variable.....				202	3	1
Total.....						1452
MECHANICAL ENGINEERING						
Mechanism.....	101	3	33	114	3	58
Mechanism and Machine Drawing (I. A. 112).....						19+
Mechanism and Machine Drawing.....				110	2	12
Mechanism and Machine Drawing.....				110	1	12
Mechanism Drawing.....				116	1	58
Steam Power Plants.....			24			
Steam Power Plants.....	103	3	25	104	4	53
Heat Power Engineering.....			19			
Heat Power Engineering.....	105	3	27	106	3	44
Steam Engineering.....	107	3	34			
Heating and Ventilating.....	121	3	16			
Materials of Construction.....	123	2	10			
Gas Engines.....	125	2	26			
Machine Design.....			ME22			
Machine Design.....	127	5	CH30	144	5	42
Thermodynamics.....	129	2	21			
Inspection Trip.....				130		19
Reading Course.....				134		2
Hydraulic Machinery.....						C27
Hydraulic Machinery.....				142	2	M29
Hydraulic Power.....				150	3	6
Steam Turbines.....				146	2	18



## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Thesis Work.....						10+
Thesis Work.....						10+
Thesis Work.....				148	3	3
Experimental Engineering Laboratory.....						22
Experimental Engineering Laboratory.....	169	2	4	160	2	25
Experimental Engineering Laboratory.....						29
Experimental Engineering Laboratory.....	171	3	3	164	2	24
Experimental Engineering Laboratory.....	173	5	35			
Experimental Engineering Laboratory.....			9			
Experimental Engineering Laboratory.....	175	3	10	192	3	12
Experimental Engineering Laboratory.....	179	2	21	190	6	21
MECHANICS						
Statics and Strength of Material.....	101	5	188			
Statics and Strength of Material.....	103	5	15			
Strength of Materials, Kinetics and Hydraulics.....				102	5	167
Strength of Materials.....				104	2	20
METALLURGY						
Fuels—.....	117	2	120			
Iron and Steel.....	119	2	115			
Fire Assaying.....	105	2	10			
Alloy Analysis.....	107	3	8			
Metallurgical Construction.....	111	2	7			
Metallography (Elementary).....	123	3	9			
Pyrometry.....	125	1	15			
Metallurgical Investigation.....				141	4	7
Metallurgical Analysis.....				106	4	14
Non-Ferrous Metallurgy.....				110	4	21
Technical Gas and Fuel Analysis.....				112	2	6
Metallography (Elementary).....				120	2	10
Pyrometry.....				122	1	13
Metallography.....				134	3	3
Metallurgical Thesis.....				116	3	7
Note: Ceramic Analyses 101 and 102 are given in Department of Metallurgy. See Ceramic Report.						
MILITARY SCIENCE						
Infantry, Freshman Course.....	101	1	1195	102	1	1038
Infantry, Sophomore Course.....	103	1	611	104	1	495
Field Artillery, Freshman Course.....	105	1	336	106	1	288
Field Artillery, Sophomore Course.....	107	1	92	108	1	76
Infantry, Advanced Course Seniors.....	127	3	2	128	3	1
Infantry, Advanced Course Juniors.....	125	3	24	126	3	16
Field Artillery, Advanced Course Juniors.....	135	3		136	3	11
MINE ENGINEERING						
Mine Surveying.....	103	4	29			
Mine Engineering.....	105	5	9			
Mine Trip.....	109	1	15			
Mining Problems.....	117	2	4			

## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Plans and Specifications.....				104	4	6
Mine Engineering.....				106	5	8
Mine Trip .....				110	1	11
Ventilation and Safety Appliances...				120	2	2
Thesis.....				116	3	2
MINERALOGY						
Crystallography and Mineralogy.....	102	3	28	102	3	60
Determinative Mineralogy .....				104	3	7
Physical Chemical Mineralogy .....	105	2	14			
Ore Dressing .....	113	2	7			
Microscopic Mineralogy .....	121	3-5	6			
Mineralogical Investigations .....				131	5	2
OBSTETRICS						
Junior Obstetrics.....				102	2	33
Senior Obstetrics.....	105	3	22	106	3	22
PHARMACY						
Theoretical .....	101	4	53			
Lectures and Lab .....				102	5	53
Pharmaceutical Chemistry .....	103	5	34			
Extemporaneous and Prescriptions .....				104	5	27
Materia Medica .....	105	3	42	106	3	40
Pharmaceutical Assaying .....	107	5	8			
Pharmaceutical Analysis .....				108	5	8
Pharmacognosy .....	109	3	43	110	3	43
Pharmacognosy.....	111	3	7	112	3	7
Pharmaceutical Problems.....	113	1	48			
Toxicology .....				114	3	30
Urinary Analysis .....				116	3	32
Pharmaceutical Latin and Prescription...	119	4	35			
Commercial Pharmacognosy.....				120	3	41
Commercial Problems.....				122	2	26
Current Literature (technical).....				124	1	21
Materia Medica Medical .....	131	2	59	132	3	58
PHILOSOPHY						
Introduction to Philosophy.....	101	3	195	121	3	57
Introductory Logic .....	102	3	24	102	3	174
Elementary Ethics .....	105	3	45	106	3	47
History of Philosophy .....	107	3	25	108	3	29
Present Conflict of Ideals.....	109	3	13			
Advanced Ethics .....	111	2	2			
Advanced Logic .....	113	2	3	114	3	3
Aesthetics .....	115	2	25	116	2	23
Metaphysics .....	121	3	5	122	3	3
Representative Ancient Philosophers .....	123	3	3			
Realism .....				128	3	5
Political and Social Philosophy .....				134	3	8
Eighteenth and Nineteenth Century Thought.	138	3	5	139	3	6



## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Pragmatism .....	.....	.....	.....	150	3	12
American Philosophy .....	153	2	3	154	2	4
Seminary .....	201	3	2	201	3	3
*Totals .....	.....	35	350	.....	35	374
<p>*Note: The grand total of 724 is the largest enrollment since I have been connected with this department. In 1910-11, my first year here, the grand total was 86. In all courses, except 101 and 102, the work has been satisfactory and up to the average. In 101 and 102 the work has not been satisfactory; in particular too large a proportion of the freshmen enrolled in these courses have proved incapable of doing the work at all. We do not understand why so many persons devoid of any sense of accuracy in thinking and expression and woefully deficient in information and vocabulary have been granted the requisite number of entrance units from high schools. It is obvious that a considerably larger proportion of persons quite unfitted to do serious college work have been admitted to this university during the past two years than during the years previous. The good students seem to be just as good as ever; but the incapables are relatively more numerous and are more incapable or indifferent. Until there is a marked improvement in the average quality of the freshman class, this department has decided that freshmen should not be permitted to take any courses in philosophy. It seems wisest that other departments should bear the onus of the sifting process. Really competent freshmen are capable of beginning philosophy to advantage, but the proportion of competents has been too small during the past two years.</p>						
PHYSICAL EDUCATION						
<i>Women's Department</i>						
Physical Education .....	131	1	539	132	1	481
Physical Education .....	133	1	281	134	1	263
Physical Education .....	135	3	3	136	1	3
Physical Education .....	Elec-	tive	100	Elec-	tive	120
<i>Men's Department</i>						
Physical Education (Freshman Requirement 2 hours per week) .....	101	1	1704	102	1	1556
Hygiene and First Aid .....	125	2	3	.....	.....	.....
Teaching of Physical Education .....	.....	.....	.....	122	2	5
PHYSICS						
General Physics (Arts, no entrance credit) ..	103	4	130	104	4	88
General Physics (Arts, entrance credit) .....	105	4	140	105	4	100
Physics for Students in Agriculture .....	109	3	190	109	3	98
General Physics (Eng.) .....	111	3	92	112	3	57
General Physics (Eng.) .....	.....	.....	.....	111	3	26
General Physics (E. E.; M. E.) .....	113	5	138	114	4	42
Physics Problems .....	115	2	11	116	2	5
General Physics (Arch.) .....	117	2	8	118	2	6
General Physics (M. E.) .....	.....	.....	.....	119	3	57

## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Teaching of Physics (Education).....				120	2	4
Physics Laboratory (Arts).....	121	3	4	122	3	5
General Physics (C. E.).....				125	5	39
Physical Laboratory (E. E.).....	133	2	58			
Electrical Measurements (E. E.).....				134	4	46
Physical Laboratory (M. E.).....				138	2	54
Advanced Electrical Measurements (E. E.).....				139-40		4
Advanced Light and Electricity (Arts, Grad.).....	143	3	6	144	3	4
Proseminary in Physics (Arts, Grad.).....				146	1	1
Thermodynamics and Electrolytic Conduction (Grad.).....	205	2	7	206	2	5
Conduction of Electricity Through Gasses and Radio.....						
Activity (Grad.).....	213	2	4	214	2	1
Total No. Students in Department.....	788			652		
(Courses in Applied Optics not included—See separate report)						
PHYSIOLOGY, PHYSIOLOGICAL CHEMISTRY AND PHARMACOLOGY						
CLYDE BROOKS—						
Medical Physiology.....	121	5	40	122	5	36
Medical Biological Chemistry.....	123	4	70			
*Medical Pharmacology.....				130	4	30
Dental Biological Chemistry.....				134	3	31
Research in Physiology, Biological Chemistry and Pharm.....	203	5	3	204	5	3
ALBERT M. BLEILE—						
Introductory Physiology.....	101	3	75	102	3	70
General Physiology.....	119	3	50	120	3	49
Physiology Laboratory.....	109	3-5	8	105	5	18
R. J. SEYMOUR—						
Introductory Physiology.....	101	3	150	102	3	140
Veterinary Physiology.....	114	4	20	132	3	104
E. P. DURRANT—						
Introductory Physiology.....	101	3	65	102	3	60
*Physiological Laboratory.....	109	3-5	8	105	5	18
Physiology for Pharmacy.....	107	3	18			
Advanced Physiology.....	115	5	18	118	5	15
CLAYTON MCPEEK—						
Dental Physiology.....	127	3	19	128	3	19
Medical Pharmacology.....				130	4	30
MILLIAN IRVING—						
*Medical Pharmacology.....				130	4	30
*Medical Biological Chemistry.....	123	4	70			
*Medical Physiology.....	121	5	40	122	5	36
*Dental Biological Chemistry.....				134	3	31
*Dental Physiology.....	127	3	19	128	3	19

\*Assisted in giving the course.



## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
<b>POLITICAL SCIENCE</b>						
Government in the United States and Europe	101	3	176	102	3	149
Government in the United States and Europe	106	3	10	101	3	59
Municipal Government	106	3	10	130	3	8
Municipal Functions	131	2	26	132	2	23
State Government	125	3	18	126	3	20
State Functions	113	2	9			
Introduction to Jurisprudence	117	2	3			
International Law						
Problems in International Politics						
Proseminary in Political Science						
<b>PRINCIPLES OF EDUCATION</b>						
Principles of Education 101—2 sections	101	3	87			
Observation, Criticism and Practice	104	3	23			
Biological Principles in Education	105	3	9	101	3	42
Principles of Education				104	3	69
Biological Principles in Education				106	3	5
Plant, Animal and Human Behavior						
<b>PSYCHOLOGY</b>						
Elementary	101	3	988	102	3	801
Elementary	102	3	136	101	3	263
Elementary	103	3	7	104	3	8
Educational	107	2	101	108	2	100
Educational	108	2	10	107	2	17
Experimental, Introduction	111	3	7	112	3	7
Genetic	115	2	13	116	2	13
Abnormal	121	4	20	122	4	36
Social	125	3	25	126	3	21
Advertising	128	2	43			
Advanced	129	2	10	130	2	9
Mental Tests	133	3	7	134	3	6
The Psychological Clinic	147	2	6	148	2	12
Physiological	149	2	7	150	2	2
Criminal and Legal	151	2	11	152	2	8
Minor Research	141	2	6	142	2	6
Major Research	201	2-5	5	202	2-5	6
Seminary	203	2	6	204	2	6
Contemporary Literature	205	1	6	206	1	6
Mental and Social Measurements				114	2	6
Psychopathology				124	2	10
Industrial				127	2	39
Total		46	1414		50	1376
<b>ROMANCE LANGUAGES</b>						
Elementary French	101	4	847	101	4	41
Elementary French	102	4	210	102	4	543
Modern French Literature	103	4	503	103	4	143
Modern French Literature	104	4	45	104	4	380

## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Credit Hours	Course No.	Total No. of Students in All Sections
Science Reading.....				106	4	23
Advanced Prose Composition.....	107	2	57			
History of French Literature.....	2			108	2	21
Seventeenth Century Drama Moliere and Corneille.....	109	3	68			
Seventeenth Century Tragedy and Prose.....				110	3	61
Eighteenth Century Drama.....	111	2	14			
Nineteenth Century Drama.....				112	2	17
Recent French Prose.....	113	2	32			
Practice in Speaking and Writing French.....				114	2	42
Old and Middle French.....	119	2	6			
French Phonetics.....	123	2	16			
Review of French Syntax.....				124	2	16
<i>Italian</i>						
Elementary Italian.....	101	4	13	102	4	110
<i>Spanish</i>						
Elementary Spanish.....	101	4	1036	101	4	55
Intermediate Spanish.....				102	4	684
Intermediate Spanish.....	103	4	265	104	4	124
Advanced Spanish.....	105	3	26	106	3	18
Classical Spanish Literature.....	107	2	11	108	2	12
Commercial Reading and Correspondence.....				110	4	46
The Teaching of Spanish.....	111	2	11			
Advanced Conversation and Composition.....				112	3	8
<i>Graduate Courses</i>						
Research in Spanish Literature.....	209	3	2	210	3	2
Old Spanish.....	211	2	1			
Summary in French Literature.....	217	2	4			
Research in French Literature.....				208	2	2
Total.....			3299			2331
RURAL ECONOMICS						
Farm Accounting.....	101	2	23	101	2	12
Adv. Farm Accounts.....	102	2	5			
Farm Management.....	103	4	30			
Agricultural Economics.....	104	3	53	104	3	69
Rural Community Life.....				110	3	47
Distribution of Farm Products.....	113	3	20			
Cooperation in Agriculture.....				116	2	19
Advanced Farm Management.....				111	1	6
Land Tenure.....				114	2	6
Rural Community Development.....				118	2	5
Research Work.....	201	3-6	6	202	3-6	5
Farm Accounts, (3 year).....	51	4	136	52	4	119
Cooperation in Agriculture, (3 year).....	53	3	9			
Rural Community Life (3 year).....				54	4	15
Farm Management.....				***	4	66
Agricultural Extension.....	102	2	34			

\*\*\*Short Courses



## THE WORK OF INSTRUCTORS—1919-1920—Continued

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
<b>SCHOOL ADMINISTRATION</b>						
Public Education in the United States . . . . .	101	3	75	101	3	22
The Administration of Rural Education . . . . .	103	2	3			
The Administration of Secondary Schools . . . . .	111	3	20	112	3	65
The Administration of Elementary Schools . . . . .	113	3	3	114	3	10
Seminary in School Administration . . . . .	201	2-5	1	202	2-5	1
Including those working on final theses about twenty-five men have been carrying on major graduate work under the supervision of the department during the year. Our chart shows these men to be well scattered over the state.						
<b>STUDENT HEALTH SERVICE</b>						
Health Service . . . . .			1913			2037
<b>VETERINARY MEDICINE</b>						
Veterinary Anatomy . . . . .	101	5	29	102	7	27
Veterinary Anatomy . . . . .	135	6	19	136	6	21
*Applied Anatomy . . . . .	134	2	16			
Materia Medica & Therapeutics . . . . .	107	3	19	108	4	25
General Pathology . . . . .	105	5	21	140	5	25
Pathology . . . . .	137	3	23	138	3	23
Laboratory Diagnosis . . . . .				142	2	25
Horseshoeing . . . . .				109	3	18
Diseases of Small Animals . . . . .	115	5	24			
Sporadic Diseases of Large Animals . . . . .				126	5	25
Physical Diagnosis . . . . .	127	3	22			
General Surgery . . . . .	120	3	26			
Special Surgery . . . . .	133	4	27	132	4	27
Infectious Diseases of Large Animals . . . . .	143	5	22			
Obstetrics . . . . .				111	3	24
Hygiene and Sanitation . . . . .				144	3	23
Clinic . . . . .	119	3	21	118	3	22
Clinic . . . . .	123	3	25			
*Clinic . . . . .				124	3	8
*Operative Practice . . . . .	121	1	27			
*Meat Inspection . . . . .	122	3	29			
Veterinary Medicine for Agriculture						
Students . . . . .	151	3	23	152	3	11
Winter Course in Agriculture . . . . .		3	100			
Agriculture . . . . .	51	3	12	52	3	12
**Veterinary Law . . . . .					1	
*Electives						
**Not given, due to the inability of the Law Faculty to furnish an Instructor.						
<b>ZOOLOGY AND ENTOMOLOGY</b>						
Elementary Zoology . . . . .	101	3	855	102	3	520
Elementary Zoology . . . . .				101	3	75
General Principles of Heredity . . . . .	115	3	95	115	3	70
Advanced Zoology of Invertebrates . . . . .	121	3	6	122	3	6
Microtechnic . . . . .	123	2	5			
Evolution . . . . .	131	3	10	132	3	7

## THE WORK OF INSTRUCTORS—1919-1920—Concluded

COURSE SUBJECT	FIRST SEMESTER			SECOND SEMESTER		
	Course No.	Credit Hours	Total No. of Students in All Sections	Course No.	Credit Hours	Total No. of Students in All Sections
Ornithology.....				140	2	7
Minor Investigation (Beginning Research) ..	141	vari- able	2	142	vari- able	2
Teaching of Zoology.....	145	3	7			
Animal Ecology.....	159	3	1			
Quantitative Studies in Animal Behavior ..	153	2-5	2			
Economic Entomology.....	107	3	92	108	3	11
Advanced Entomology.....	113 } 137 }	4	5	114	3	....
Apiculture.....				112	3	17
Entomological Literature.....	147	2	4			
Taxonomy.....				148	2	2
Medical Entomology.....	149	3	4			
Insect Control.....	151	3	4	152	3	4
Morphology and Development of Insects ..				162	4	3
Seminary in Zoology and Entomology.....	201	1	7	202	1	7
Research Work in Zoology and Entomology ..	241	vari- able	7	242	vari- able	7
Invertebrate Zoology.....	247	5	6	248	5	5
Total.....			1110			723



# APPENDIX V

\*SHOWING THE WHOLE NUMBER OF DEGREES IN COURSE CONFERRED SINCE THE FOUNDING OF THE UNIVERSITY

	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	
Bachelor of architecture																																			8	9	7	8	13	13	3	1	11	
Bachelor of architectural engineering																																												
Bachelor of arts	1	1	6	2	2	1	5	4	6	8	6	1	7	2	6	9	12	19	13	17	18	8	14	16	6	16	68	68	93	80	80	107	120	122	139	148	193	169	194	176	119	126	169	
Bachelor of engineering																																												
Bachelor of ceramic engineering																																												
Bachelor of chemical engineering																																												
Bachelor of civil engineering																																												
Bachelor of electrical engineering																																												
Bachelor of mechanical engineering																																												
Bachelor of engineering in mining																																												
Bachelor of philosophy																																												
Bachelor of science	5	5	1	2	5	3	2	2	4	2	4	8	7	4	8	5	11	7	9	4	10	10	2	7	11	5	10	7	3															
Bachelor of science (Agr.)																																												
Bachelor of science in applied optics																																												
Bachelor of science in biology																																												
Bachelor of science in business admr.																																												
Bachelor of science in chemistry																																												
Bachelor of science in dom. science																																												
Bachelor of science in education																																												
Bachelor of science in entomology																																												
Bachelor of science in forestry																																												
Bachelor of science in home econom.																																												
Bachelor of science in horticulture																																												
Bachelor of science (H. F.)																																												
Bachelor of science (L. Arts)																																												
Bachelor of science in journalism																																												
Bachelor of science in landscape architecture																																												

## APPENDIX V—Concluded

	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	
Master of science				1								1	1	2	2		2		3	3	2	3	3	2	1								1	8	6	14	15	25	32	19	8	29		
Master of science (Agriculture)																		1	2		1									2	1	3	3	1										
Master of science (Dom. Sc.)																												1																
Master of science (H. F.)																				1	1	1										1												
Master of science in public health																																								3				
Doctor of philos- ophy		1															1									1		1	1		1		2		1	5	1	2	1	3	11	9	4	7
Doctor of science												1						1		1						1		1	1		1													
Doctor of Dental Surgery																																												
Doctor of Medicine																																												
Juris Doctor																																												
Bachelor of Laws															9	18	15	16	6	23	22	21	25	17	26	20	11	15	17	26	15	16	22	10	19	18	19	18	24	17	11		15	
Master of Laws															2	4	2		6							2	3	1																
Total	6	7	9	8	9	11	12	16	18	24	28	26	30	36	61	79	70	112	118	135	126	99	137	135	141	170	194	209	225	249	287	333	370	422	501	515	649	793	902	941	565	470	801	
Degrees conferred during the year															1												6	0	5	6	5	15										61	67	76
Totals																											200	209	230	255	292	348										626	537	877

\*Statistics given prior to 1904 covered only the degrees granted at the Commencement.



# APPENDIX VI

## SHOWING THE NUMBER OF STUDENTS IN THE GENERAL, TECHNICAL AND PROFESSIONAL COURSES

	1890 1891	1891 1892	1892 1893	1893 1894	1894 1895	1895 1896	1896 1897	1897 1898	1898 1899	1899 1900	1900 1901	1901 1902	1902 1903	1903 1904	1904 1905	1905 1906	1906 1907	1907 1908	1908 1909
General Courses (College of Arts) . . . . .	137	151	194	245	256	322	327	358	371	419	439	403	490	496	490	551	572	630	714
Technical Courses (other Colleges, except Law) . . .	166	259	381	368	424	453	453	511	541	603	771	888	1039	1135	1129	1262	1280	1436	1626
Professional Courses (Colleges of Law) . . . . .	...	55	67	72	65	100	132	148	191	201	220	188	166	171	179	162	153	138	132
*Graduate Students and Summer School . . . . .	2	...	...	1	...	94	97	133	75	45	51	49	62	108	54	240	339	379	458
‡Summer School (Shopwork) . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	74	75	81	80	90
Lake Laboratory (Summer) . . . . .	...	...	...	...	...	...	...	...	...	...	...	19	...	23	32	26	19	26	32
Totals . . . . .	305	465	642	686	745	969	1009	1150	1178	1268	1481	1547	1757	1933	1958	2316	2444	2689	3052
Names counted twice . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	159	167	216	258
Net Total . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2157	2277	2473	2794

## APPENDIX VI—Concluded

	1909 1910	1910 1911	1911 1912	1912 1913	1913 1914	1914 1915	1915 1916	1916 1917	1917 1918	1918 1919	1919 1920
General Courses (Colleges of Arts, Commerce and Journalism and Education) . . . . .	845	865	962	1009	1139	1494	1820	2198	2220	2558	3422
Technical Courses (Other Colleges Except Dentistry, Homoeopathic Medicine, Law and Medicine) . . . . .	1643	1780	1979	2106	2392	2373	2491	2398	1884	2129	2733
Professional Courses Colleges of Dentistry, Homoeopathic Medicine, Law and Medicine) . .	181	170	185	198	187	615	556	514	384	300	718
Graduate Courses (Graduate School) . . . . .	96	70	97	128	133	185	244	233	161	143	208
Summer Session . . . . .	606	617	738	575	671	926	1010	1166	918	909	1229
Lake Laboratory (Summer) . . . . .	36	22	28	25	32	14	19	15	14	2	11
Winter Courses . . . . .	159	183	273	227	203	187	173	187	119	121	178
Total . . . . .	3566	3707	4262	4268	4757	5794	6313	6711	5700	6162	8499
Names counted twice . . . . .	291	268	334	299	322	462	491	523	550	437	682
Net Total . . . . .	3275	3439	3928	3969	4435	5332	5822	6188	5150	5725	7817

\*Until 1896 graduate students have been included in the first three classes.

‡Until 1904 summer term students in shopwork have been included with graduate students.

## APPENDIX VII

## SHOWING DEGREES AND CERTIFICATES GRANTED IN 1920

## GRADUATE SCHOOL

Dean: WILLIAM MCPHERSON

## DOCTOR OF PHILOSOPHY

Edward Everett Hale Boyer, B. Sc. (Massachusetts Agricultural College), M. Sc. ....	Lynn, Mass.
Walter Sylvester Gamertsfelder, A. B. (Northwestern College), B. D. (Evangelical Theological Seminary) .....	Geneva, N. Y.
Enoch Franklin George, A. B., A. M. (West Virginia University) .....	Red Creek, W. Va.
Swarna Kumer Mitra, B. S., M. S. (University of California) .....	Dacca, India
Jeannette Chase Reamer, B. A., M. A. ....	Columbus

(Five candidates)

## As of the Class of 1919

Melvin Guy Mellon, B. S. (Allegheny College), M. Sc. ....	Conneaut Lake, Pa.
Frank Carl Vilbrandt, B. A., M. A. ....	Woodville

(Two candidates)

## MASTER OF ARTS

Athel Dale Cotterman, A. B. (Capital University) .....	Thornville
Maurice Condit Cross, B. A. ....	Columbus
William Homer Ellsworth, B. A. (Defiance College) .....	Holgate
Erwin Allen Esper, B. A. ....	Columbus
Daniel Luther Evans, B. A. ....	Columbus
Eleanor Pearl Haas, B. A. ....	Lower Salem
Eldra Wade Hartley, B. A., B. Sc. in Edu. ....	Columbus
Clarice Sarah Hobensack, B. Sc. in Edu. ....	Columbus
Dio Lewis Holl, A. B. (Manchester College) .....	North Canton
Margaret Eloise Jones, B. A., B. Sc. in Edu. ....	Columbus
Adelaide Knight, A. B. (Vassar College) .....	Columbus
Harry Fisher Kohl, A. B. (Wittenberg College) .....	Springfield
Walter Charles Kraatz, B. A. (University of Wisconsin) ....	Milwaukee, Wis.
Gertrude Lawrence, B. A. ....	Columbus
Elsey L. Lively, B. Sc. in Agr. ....	Fairmont, W. Va.
Della Rodgers Maddox, A. B. (University of Missouri) .....	Columbus
Harry Ignatius Marshall, A. B. (Dartmouth College) ....	Insein, Burma, India
Cleo Allen Matheny, A. B. (Randolph-Macon Woman's College) .....	Dayton
Mary Elizabeth Miller, B. A. ....	Gahanna
Gladys Lynn Ninegar, B. A. (Ohio Wesleyan University) .....	Hilliards
Ellis Leo Noble .....	Mt. Sterling
Helen Muzette Noble, B. A. (Muskingum College) .....	New Concord
Jean Katharine Elaina Patton, A. B. (Grove City College) ....	Vandergrit, Pa.
Florence Helen Rees, Ph. B. (Denison University) .....	Pemberville
Nettie Lee Roth, A. B. (Otterbein College) .....	Dayton
Scott Matt Taylor, B. A. ....	Winchester, Ky.



Gertrude Wack, B. A. ....	Elyria
David Andrew Weir, B. A. ....	Columbus
Gertrude Williams, A. B. (Defiance College) .....	West Mansfield

(Twenty-nine candidates)

## MASTER OF SCIENCE

Walter Valentine Balduf, B. A. (Ohio Wesleyan University) .....	Columbus
Almon Jay Basinger, B. A. ....	Columbiana
William Carl Beaver, B. A. (Marietta College) .....	Whipple
Robert Wells Boreman, M. E. in E. E. ....	Parkersburg, W. Va.
Arthur Devries Burke, B. S. (University of Wisconsin) .....	Wheeling, W. Va.
Dorris Coss, B. Sc. in H. E. ....	Columbus
Guy Dowdy, B. S. Agr. (West Virginia University) .....	Columbus
Merle Leroy Dundon, S. B. (Mt. Union College) .....	New Milford
Kenneth James Durant, B. A. ....	Akron
Rachel Hartman Edgar, B. Sc. in H. E. ....	Coshocton
Alfred Earl Galloway, B. A. ....	Bridgeport
Joseph Frederic Haskins, B. Sc. (Denison University) .....	Granville
Glenna Julia Hesse, B. Sc. in Edu. ....	Columbus
Cloyd Delson Looker, B. Sc. in Edu. ....	Columbus
Clare S. Martin, B. Sc. in For. ....	New Castle, Ind.
Frank Isaac Mayer, B. S. (Hiram College) .....	Newark
Lyle Jordan Michael, B. S. (Otterbein College) .....	Bryan
John Clay Overpeck, B. S. in Agr. (Purdue University) .....	Rosedale, Ind.
Gordon Derby Patterson, B. S. (Allegheny College) .....	Meadville, Pa.
Joel Bigelow Peterson, B. Sc. (Denison University) .....	Chicago, Ill.
Ling Lam Pun, A. B. (Leland Stanford University) ....	Kwai Ping City, China
James Thomas Robson, B. Ch. E. ....	Elyria
Jasper Dean Sayre, B. A. ....	Townville, Pa.
Isaac Jacob Sollenberger, A. B. (Manchester College) ..	North Manchester, Ind.
Paul Stegeman, A. B. (Hope College) .....	Holland, Mich.
Charles Leroy Thrash, B. Sc. in Agr. ....	Columbus
Clarence Lazear Underwood, B. S. Agr. (West Virginia University) .....	St. Marys, W. Va.
Edward Lawrence Wicliff, B. Sc. in Agr. ....	Columbus
William Hunt Williams, B. A. ....	Columbus

(Twenty-nine candidates)

## DEGREES CONFERRED DURING THE CURRENT ACADEMIC YEAR

## MASTER OF ARTS

Elizabeth Jane Britan, B. S., A. B. (Hanover College) .....	Hanover, Ind.
Sadie Elizabeth Overton, Ph. B. (University of Chicago) .....	Wilberforce
Bernard James Rockwood, A. B. (Denison University) .....	Granville
Edward Marquis Starr, A. B. (Oberlin College) .....	Mt. Vernon
Ralph Everett Stone, A. B. (Ohio Northern University) .....	Derby
Florence Swisher, B. L. (Ohio Wesleyan University) .....	Delaware
Joseph Harvey Young, A. B. (Defiance College) .....	Continental

(Seven candidates)

## MASTER OF SCIENCE

Robert Willoughby Collins, B. A. ....	Columbus
Robert Anderson Fisher, B. Ch. E. ....	Steubenville
Samuel Frank Hinkle, B. Sc. (Muskingum College), B. Sc. in Agr. ....	Columbus
James Garfield Ralston, B. Sc. in Edu. ....	Fredericktown

(Four candidates)

## COLLEGE OF AGRICULTURE

Dean: ALFRED VIVIAN

## BACHELOR OF SCIENCE IN AGRICULTURE

Aram Krikor Aghababian .....	Constantinople, Turkey
Thomas George Allen .....	Navarre
Carl Raymond Arnold .....	Arcanum
George Brunton Arthur .....	Chagrin Falls
Orson Elmer Barker .....	Celina
Alvin W. Barr .....	Amanda
Virgil Leroy Beaber .....	New Philadelphia
Gilbert Markley Boehm .....	Georgetown
Melby William Brady .....	Okeana
Reinhard Bretz .....	Columbus
Henry Russell Brinker .....	Leetonia
Thomas Raymond Brownlee .....	Lowellville
Harley Corwin Brunskill .....	Copley
Thomas Hilbert Connell .....	Youngstown
Charles Harold Cook .....	Lima
Watson Lyman Deaver .....	Rose Farm
James Cecil Dickson .....	Maysville, Ky.
John Frederick Dowler .....	Groveport
Donald Charles Drake .....	Cincinnati
Benjamin Druckerman .....	New York City
Bernard Marcellus Durbin .....	Danville
George Alfred Dustman .....	Youngstown
George Everett Evans .....	East Kingston, N. H.
Kennyth Lyoul Ewart .....	Tallmadge
Lawrence Myron Fenner .....	Tippecanoe City
Ray Rife (As of the Class of 1917) .....	Van Wert
Wilbur H. Ford .....	Ashland
Hugo Alfred Fox .....	Lakewood
Mark Adin Fuller .....	Lima
Willis Root George .....	Newcomerstown
Sydney Goldstein .....	Sharon, Pa.
John Kenneth Graham .....	Adams Mills
Carl Eugene Gressle .....	Cleveland
Albert Theodore Haag, Jr. ....	Cleveland
Arthur Edwin Halterman .....	Columbus
Harold Loucks Hedrick .....	Columbus
Richard Earl Helt .....	South Webster
George Fred Henning .....	Hicksville
Charles Adams Henry .....	Cleveland
John Leo Hirsch .....	Chillicothe
Hubert Crath Holmes .....	Columbus
Lawrence Lester Huber .....	Bluffton
Earle Levan Johnson .....	Painesville
Lawrence Albert Kauffman .....	Dayton
Thomas Coe Kennard .....	Columbus
Horace Meredith Kidd .....	Dayton
Orlo Oscar Koehler .....	Van Wert
George William Kreidler .....	Warren



Edgar DeWitt Lenhart .....	South Zanesville
Julian Jose Linao .....	Moron, Philippines
Harold Forest Link .....	Camp Chase
Frank Monroe Long .....	Ostrander
Philip Rosemand Lowry .....	Columbus
Lawrence Franklin McDorman .....	South Charleston
Warren Morris McVey .....	Highland
Eunice Gertrude Merton .....	Peninsula
Roger Irving Mitchell .....	Columbus
Charles Frederic Monroe .....	Toledo
Lawrence Levi Moore .....	Canal Winchester
Ralph Max Mork .....	Cincinnati
Willis Shipman Mozier .....	Mt. Gilead
Jacob Carl Neff .....	Osborn
Bertrand Otting .....	Warren
Lewis Shelby Pence .....	Hillsboro
Michel George Pimenides .....	Constantinople, Turkey
Lee Clement Prickett .....	Columbus
Richard Oliver Raine .....	Rainelle, W. Va.
Bashford Watts Reading .....	Columbus
Harold Adelbert Rose .....	Grafton
Clarence Eldo Rowland .....	Roxbury
Howard Julius Ruetenik .....	Cleveland
James Herman Scofield .....	South Charleston
Clarence Wilbur Siddall .....	Bellaire
Edward Annandale Silver .....	Montrose, Scotland
Mark Earl Simon .....	Bloomdale
Ray Jennings Smylie .....	Cadiz
Sanford Reed Speelman .....	Washington, D. C.
Samuel Shoup Studebaker .....	Tippecanoe City
Russell Lowell Sunderland .....	Dayton
Arthur Drummond Swingle .....	Columbus
Dann Ohmer Taber .....	Chagrin Falls
Alvan Chalfant Thompson .....	Cleveland
Frank Edward Todd .....	Elyria
Edward John Walter .....	Bedford
Harold Edward Walton .....	Twinsburg
David Stathem Weaver .....	Cincinnati
Thomas Corwin Wiley .....	Medina
Samuel Everett Wissinger .....	Conemaugh, Pa.
Karl Thomas Woodward .....	Sharon Center

(Eighty-nine candidates)

## BACHELOR OF SCIENCE IN HOME ECONOMICS

Christina Wilson Anderson .....	Columbus
Edith Bangham .....	Wilmington
Inez Bernita Blystone .....	Berkey
Lelia Evangeline Booher .....	Dayton
Lois Miller Carter .....	Duncan Falls
Narzella Hortense Cline .....	Columbus
Helen Mary Conard .....	Philadelphia, Pa.
Naomi Gereldine Conway .....	Columbus
Edith Marie Dakin .....	Columbus
Marian Emily Dodez .....	Apple Creek

Camille Justine Ebert .....	Columbus
Helen Ferguson .....	Columbus
Jennie Cornelia Fisher .....	Columbus
Ruth Frazier .....	Freeport
Ora Garmhausen .....	New Bremen
Agnes Howard Grant .....	Cincinnati
Mary Gladwin Hedges .....	Westfield, Mass.
Ruth Elizabeth Heidinger .....	Englewood
Glenna Julia Hesse, B. Sc. in Edu. ....	Columbus
Edna Patterson Howell .....	Waynesfield
Anna Josephine Jaros .....	Chagrin Falls
Hannah Lewis .....	Grove City
Marjorie McDowell .....	Columbus
Mildred Glick Mason .....	Circleville
Ernestine Hunter Miller .....	Jackson
Helen Mary Miller .....	Columbus
Miriam Mundhenk .....	Brookville
Charlotte May Neutse .....	Coshocton
Iris Enid Plotner .....	West Mansfield
Ruth CoVan Reidenbach .....	Columbus
Esther Elizabeth Schrider .....	Bryan
Marion Gertrude Smith .....	New Brighton, Pa.
Sarah Louise Sparling .....	Waterville
Helen Estelle Steele .....	Geneva, Ill.
Mary Retta Titus .....	Newark
Helen Westbrook Tracy .....	Columbus
Anna Naomi Tucker .....	Brookville
Ruby Tyler .....	Alexandria
Henrietta Anna Wahlenmaier .....	Columbus
Clara Elizabeth Walt .....	Columbus
Janet C. Ward .....	Greenspring
Lena Corrine Waters .....	Georgetown
Myrtle Rosetta Wolcott .....	West Farmington

(Forty-three candidates)

## DEGREES CONFERRED DURING THE CURRENT ACADEMIC YEAR

## As of the Class of 1919

## BACHELOR OF SCIENCE IN AGRICULTURE

Robert Wayne Gardner .....	Factoryville, Pa.
Harold George Kenestrick .....	Shelby
Don Shannon Kochheiser .....	Bellville
John Grover McGuffey .....	Groveport
Hazelton Albanus Purvis .....	Bremen
Frederick F. Roehll .....	Dayton
Andrew Scott Stauffer, B. Sc. (Ohio Northern University) .....	Bluffton
Homer Ward Walter .....	Canal Dover

(Eight candidates)

## BACHELOR OF SCIENCE IN HOME ECONOMICS

Agnes Mildred Moore .....	Columbus
---------------------------	----------

(One candidate)



## COLLEGE OF ARTS, PHILOSOPHY AND SCIENCE

Dean: JOSEPH VILLIERS DENNEY

## BACHELOR OF ARTS

Kathryn Lloyd Alban .....	Columbus
Earl Dean Alexander .....	Sandusky
Ryllis Clair Alexander .....	Columbus
Marion Eva Ellensworth .....	Columbus
Donald Benton Anderson .....	Marble Cliff
Lawrence G. Andrews .....	Wauseon
Emerson Victor Arnold .....	Ironton
Helen Lucille Arnold .....	Zanesville
Rodney Brown Baldwin .....	Hilliards
Marguerite Virginia Ballinger .....	Lancaster
Leo William Bayles .....	Columbus
Mildred Beatty .....	Columbus
Harold Frederick Bergener .....	Delphos
Eunice Elizabeth Bickel .....	Columbus
Olive Florence Bowman .....	Niles
Alfreda Sara Bradley .....	Columbus
Clara Nicholson Bream .....	Columbus
Joseph Breitbart .....	Cleveland
Charles Rishell Brokaw .....	Columbus
Edward Peter Buckenmyer .....	Swanton
Harry Siering Bugbee .....	Ashtabula
Colin Alfred Campbell .....	Bellefontaine
Kenyon Stafford Campbell .....	Columbus
Ruth Kious Carvey .....	Columbus
Mary Lucile Church .....	Brink Haven
Dorothea Conrad .....	Columbus
Edwin Nelson Cole Coolidge .....	Columbus
Robert Arthur Cotner .....	Athens
Clarence Jefferson Crossland .....	Zanesville
Frederick Emory Croxton .....	Columbus
George Richard Daniels .....	Canton
Alice Louise Dann .....	Tullahoma, Tenn.
Atlene Fae Davis .....	Westerville
Herman Crow Davis .....	Urbana
Mildred Kathryn Dietsch .....	Findlay
Minnie Catherine Dietz .....	Sugar Creek
Raymond Anson Dobbins .....	Ada
Maynard McClure Donaldson .....	Columbus
Adaline Margaret Drake .....	Columbus
Clifford Otis Eddy .....	Ellicottville, N. Y.
Gladice Eno .....	Des Moines, Iowa
Ethel Cooke Esper .....	Columbus
Charles Hugh Fee .....	East Orwell
Eleanor Mary Ferris .....	Columbus
John William Flaig (As of the Class of 1919) .....	New Madison
Margaret Sutherland Flynn .....	Columbus
Herbert Leland Ford .....	Ashland
Raymond Henry Frank .....	Columbus
Marguerite Frey .....	New Richmond

Patrick Henry Fusco .....	Youngstown
Clara Friend Gibson .....	Clarksburg, W. Va.
Pearl Gordon .....	Columbus
Wilbur Lee Grandle .....	Newark
Christine Louise Grant .....	Middleport
William David Griffith .....	Columbus
Esta Floy Hambel .....	Columbus
Albert Steele Hand .....	Dayton
John J. Hane .....	Marion
John Clayton Harlor .....	Columbus
Charles Frederick Harrold .....	Columbus
Marie Ann Hauenstein .....	Columbus
Ralph Lawrence Hays .....	Wooster
George Whiting Hibbitt .....	Louisville, Ky.
Elsie Llewellyn Hinkle .....	Columbus
Thomas Allen Hites .....	Wooster
Fawn Carman Holland .....	Lancaster
Lola Hollopeter .....	Carey
William Vermillion Houtson .....	Columbus
Lee Allen Humphrey, A. B. (Ashland College) .....	Nankin
Helen Hunter .....	Lockbourne
Harry William Jackman .....	Carrollton
Lester Lynne Jackson .....	Morrisonville, Ill.
Josephine Jennings .....	Columbus
Carolyn Abbe Joerndt .....	Columbus
David Everett Jones .....	Columbus
Samuel Albert Jones .....	Columbus
Russell Elmore Karns .....	Mansfield
Altha Kimball .....	Columbus
Harold Lee Kime .....	West Salem
Glenn Daniel King .....	Sterling
Gizella Klein .....	Cleveland
Delia Klingler .....	Garrett, Ind.
Hazel Carolyn Knight .....	Columbus
Charles Shannon LaMonte .....	Columbus
Frank Lane, Jr. ....	Columbus
Mendel Elmer Lash .....	New Washington
Ruth Evalyn Lee .....	Sidney
Raymond Aloysius Lewis .....	Columbus
Robert Parker Little .....	Columbus
Shing Hsia Liang .....	Canton, China
Samuel Oldham Linzell .....	Columbus
Wilbur Hoyt Lowden .....	Columbus
George Clinton Lynch, Jr. ....	Springfield
Arthur Cook McBride .....	Cambridge
Phila Ann McGillery .....	Pomeroy
Margaret Louise McLeish .....	Columbus
Anna Vylee Madden .....	Columbus
Mabel Marie Madden .....	Columbus
Alice Barnett Maltby .....	Columbus
Benjamin Homer Marks .....	Farrell, Pa.
Germaine Marquis, B. Sc. (Universite de Besancon) .....	Besancon, France
Florentina Mathias .....	Chillicothe
Margaret Agnes Mattinson .....	South Charleston



Marie Elizabeth Merriman .....	Kenton
Wilbur Thoburn Mills, Jr. ....	Columbus
Hazel Florence Minck .....	Columbus
Elizabeth Myers Mitchell .....	Georgetown
Bertha Carolyn Mong .....	Wooster
William Lee Montgomery .....	Columbus
Paul Franklin Morse .....	Columbus
Eugenia Lois Moses .....	Powell
Harper Hale Muff .....	Somerville
Giles Justin Mundy .....	Forest
Ellis Leo Noble .....	Madison Mills
Edith Hedwig Nuber .....	Columbus
Grace Tussing Oldham .....	Reynoldsburg
Margaret Stanton Osborn .....	Columbus
Florence Paas .....	Columbus
Joseph Andrew Park .....	Cleveland
Eugenia Pavey .....	Columbus
Ruth Peirce .....	Troy
Robert Harry Phillips .....	Springfield
Jacob Placsom .....	New York City
Russell Stanton Preston .....	Portland, Ind.
Fred Homer Pumphrey .....	Dayton
Charles William Racine .....	Piqua
Helen Lansing Rardin .....	Portsmouth
Elizabeth Julietta Richards .....	Columbus
Wilbur Anthony Ricketts .....	Coshocton
Wadrow Chester Rohleder .....	Hayesville
Miriam Sisler Rood .....	Akron
Edythe Josephine Rose .....	Pittsburgh, Pa.
Howard Grey Rose .....	Columbus
Miriam Henrietta Rosenthal .....	Mt. Vernon
Howard Eugene Russell .....	Ashland
Esther Elisabeth Schmidt .....	Dayton
Edwin William Schmunk .....	Antwerp
Eleanore Adolphine Schopke .....	Emerson, Neb.
Luetta Eleanor Seitz .....	Wapakoneta
Howard Conaway Shaub .....	Johnstown
Francis Boyce Shaw .....	Columbus
Armine LaSalle Shields .....	Columbus
Ruth Slemmons .....	Columbus
Helen Esther Smith .....	Wooster
Helen Gertrude Smith .....	Columbus
Marie Smith (As of the Class of 1919) .....	West Jefferson
Florence Bertha Steuer .....	Laura
Helen Gwendolyn Stiffey .....	Columbus
Edward Schaad Stimson .....	Columbus
Martha Hartzell Stone .....	Ashtabula
Gloria Strait .....	Columbus
Georgia Nelle Swickard .....	Jackson Center
Helen Eliza Swisher .....	Columbus
Cora Amelia Sydenstricker .....	Alexandria
Robert Vassil Tallman .....	Columbus
Clara Count Taylor .....	Vevay, Ind.
Tom Vinton Taylor .....	Waverly

Tillman Roger Thompson .....	Columbus
Ruby Tyler .....	Alexandria
Mary Elisabeth Wagstaff .....	Niles
Grace Parker Weiss .....	Columbus
Mildred Jean West .....	Perry
Chauncey Elsworth Wilson .....	Johnstown
Herbert Charles Wing .....	Columbus
Walter George Wirthwein .....	Columbus
Myrtle Rosetta Wolcott .....	West Farmington
Ralph Eugene Wright .....	Celina
Mary Elvira Wurdack .....	Columbus
Raymond Andrews Younger .....	Celina

(One hundred and sixty-nine candidates)

## BACHELOR OF SCIENCE

Robert James Bowman .....	Upper Sandusky
Leland George Coe .....	Garrettsville
Joseph Heyman Cowan .....	Columbus
Chester George Egger, Ph. G. (Toledo University) .....	Toledo
Maurice Milton Linder .....	Dayton
Gordon Frederick Meuser .....	Columbus
George Thomas Pack .....	Cambridge
Herbert William Salter .....	West Unity
Loy Curtner Schiff .....	Columbus
Frank Frederick Schmidt .....	Columbus
George James Searle .....	Plymouth
Julius Shamansky .....	Nelsonville
Charles Francis Shonk .....	Lancaster
Fred Henry Stires .....	Haydenville
Aaron Dewey Vogelsang .....	New Bremen
Julien Harmon Wilson .....	Columbus

(Sixteen candidates)

## BACHELOR OF SCIENCE IN APPLIED OPTICS

Harold I. Burt .....	Cardington
West Culbertson .....	Cincinnati
Earl Baldwin Elliott .....	Dayton
Lorie Galloway Fender .....	Mt. Orab
Thomas Reed Hedges .....	Ashville
Clarence O. Miller .....	Edinboro, Pa.
Otto Meinhardt Schomburg, B. Sc. (Alabama Polytechnic Institute) .....	Columbus, Ga.
Earl Oliver Sterzer .....	Dayton

(Eight candidates)

## DEGREES CONFERRED DURING THE CURRENT ACADEMIC YEAR

## BACHELOR OF ARTS

## As of the Class of 1915

Glenn William Durflinger .....	Columbus
--------------------------------	----------

(One candidate)

## As of the Class of 1919

Wallace John Baker .....	Painesville
Donovan Baker Church .....	Danville



Marjorie Fleming .....	Columbus
Mary Winifred Greene .....	Delaware
Paul Raley Hagelbarger .....	Cuyahoga Falls
Frances Hamptonstall .....	Huntington, W. Va.
Bryan Heise .....	Wauseon
Lucile Henderson .....	Wilmington
Wayne Leslie Hopkins .....	Gallipolis
Myrtle Mae Jackson .....	Warsaw, Ind.
Helen Kathryn Laughlin .....	Newark
Minnie Mabel Lindsey .....	Ashland
Joseph Jonathan Lowden .....	Columbus
Edwin Charles Mateja .....	Cleveland
Charles August Miller .....	Toledo
Louis Harland Mischler .....	Georgetown
Edith Strickland Moodie .....	Detroit, Mich.
David Aaron Peiros .....	Steubenville
Carl Henry Reuter .....	Columbus
Ruth Margaret Romaine, B. Sc. in Edu. ....	Columbus
Clarence Crump Ross, Jr. ....	Columbus
Robert Claudy Shively .....	Columbus
Thomas Henry Sutherland, Jr. ....	Columbus
Josiah Gaddis Vance .....	Hillsboro
Carl Frederick Waidner .....	Columbus
Byron Zwyer .....	Canal Winchester

(Twenty-six candidates)

## COLLEGE OF COMMERCE AND JOURNALISM

Dean: JAMES E. HAGERTY

## BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION

Leonard William Basinger .....	Columbus Grove
Walter James Beatty .....	Warren
Theodore N. Beckman .....	Columbus
Donald Sprague Beightler .....	Marysville
Louis Bernstein .....	Columbus
Harold Kennerley Casterton .....	Columbus
Ralph Steen Conley .....	Columbus
Herbert Samuel Crim .....	Uhrichsville
Emerson Donald DeWitt .....	Columbus
Maynard McClure Donaldson .....	Columbus
Paul Gillilan Eckelberry .....	Columbus
Forreste Irvin Ellenberger .....	Tyrone, Pa.
Charles Craver Eulass .....	Lebanon
William Edmund Filiere .....	Custar
Edward Joseph Gould .....	Lorain
Solomon Henry Greenberger .....	Canton
Ferd George Holtkamp .....	Lakewood
Rudolph Henry Jettinghoff .....	Delphos
Benjamin Kasner .....	Cleveland
Thomas Marion Kent .....	Bellevue
John James Kindel .....	Cleveland
George Dewey Kneip .....	Gibsonburg
Chester Henry Kunning .....	New Bremen
Herman William Long .....	Columbus

Byron Davisson Loofbourrow .....	New Madison
Bruce A. Lowman .....	Mulberry, Ind.
Harold John Marshall .....	Cleveland
Clyde Wellman Martin .....	Logan
John Charles Martin .....	Wapakoneta
Chester Lorenzo Myers .....	Columbus
Warren Sells Park .....	Columbus
George William Quillin .....	Columbus
Meade Henry Ramsey .....	Belle Center
Ben Ratner .....	Columbus
George Elmer Rinck .....	West Alexandria
Hom̄er Leroy Rubrecht .....	Columbus
George Williams Sammons .....	Zanesville
Ray Starkey Sherer .....	Louisville
Edward Schaad Stimson .....	Columbus
George Coffman Sturgeon .....	Columbus
William Barcus Todd .....	Columbus
William Donald Walter .....	Columbus
Richard Hill Wasson .....	Barberton
Paige Gluck Westfall .....	Parkersburg, W. Va.
Kinsey Brice Wiggins .....	New Guilford
Frederick Joseph Zint .....	Wapakoneta

(Forty-six candidates)

## BACHELOR OF SCIENCE IN JOURNALISM

Walter Vaeth Brown, B. A. ....	Mount Cory
Margaret Ellen Fisher .....	Steubenville
Estle Dewey Leonard .....	Manchester
Oliver Schley Matheny .....	Columbus
Thomas Bradfield Meek .....	Columbus

(Five candidates)

## BACHELOR OF SCIENCE IN SOCIAL SERVICE

Lucile Bergman .....	Chillicothe
William James Blackburn .....	Salem
Alyce Mae Helen Converse .....	Massillon
Mary Adeline Griffith .....	Hooker
Helen Hayden Harvey .....	Chardon
Margaret Ruth Hawley .....	Columbus
Mary Bradford Laughead, B. A. ....	Middleport
Edith Rebecca Sands .....	Columbus
Frances LuVerne Shipton .....	Ironton
Myrtle M. Strom .....	Galva, Ill.
Florence Marie Thornton .....	Cleveland

(Eleven candidates)

## DEGREES CONFERRED DURING THE CURRENT ACADEMIC YEAR

## As of the Class of 1919

## BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION

Harold G. Billingsley .....	New London
Dan Howard Davies .....	Cleveland
Harold Miller Eswine .....	Pataskala
Joshua McKinley McNeas .....	Winchester, Ind.
Randall Reid Vance .....	Columbus

(Five candidates)



## BACHELOR OF SCIENCE IN SOCIAL SERVICE

Marian Louise Morrison .....	Niles
Olive Gwendolyn Tannehill .....	Columbus

(Two candidates)

## COLLEGE OF DENTISTRY

Dean: HARRY M. SEMANS

## DOCTOR OF DENTAL SURGERY

Harold Leon Aylsworth .....	Shreve
Leroy Franklin Cade .....	New Vienna
Norman Carl Colebrook .....	Cleveland
Earl Joseph Denser .....	Columbus
Dwight Luther Derr .....	Wadsworth
Harold Davies Follansbee .....	Cleveland
Jacob Abraham Freedman .....	Steubenville
Frederick Dewey Hamilton .....	Belpre
Vancil Guy Hunter .....	Jackson
William Russell Kampfer .....	Clarington
Edward Charles Knoll .....	Cleveland
Vernon Christian Maurer .....	Sidney
Gailord S. Miller .....	Detroit, Mich.
Richard Vance Nelson .....	Dayton
Radford Palmblad Potter .....	Toledo
Gale Francis Powell .....	Ashley
Roy Elden Rock .....	Dennison
Maurice Eugene Seiple .....	Bloomville
Ernest Leroy Shipp .....	Newark
Ralph Ellis Shriber .....	Akron
Herbert Lewis Wallace .....	Sandusky
Samuel Abraham Wallman .....	Iowa City, Ia.
Howard Lee Warner .....	Dayton
Jack Campbell Watts .....	Huntington, W. Va.
George Frederick Way .....	Columbus
Homer Benjamin Wellman .....	New Knoxville
Elbert Benjamin Williams .....	New Lexington

(Twenty-eight candidates)

## DEGREE CONFERRED DURING THE CURRENT ACADEMIC YEAR

As of the Class of 1918

## DOCTOR OF DENTAL SURGERY

Joseph Klase .....	Houston
--------------------	---------

(One candidate)

## COLLEGE OF EDUCATION

Dean: GEORGE WELLS KNIGHT

## BACHELOR OF SCIENCE IN EDUCATION

Jane Colborn Addison .....	Columbus
Helen Florence Agler, B. A. ....	Columbus
Donald Benton Anderson .....	Marble Cliff
Helen Lucille Arnold .....	Zanesville
Mary Christmas Arrowsmith .....	Hicksville
Grace Luella Bahls .....	Cleveland

Mary Ruth Bartlett .....	Mt. Vernon
Minona Elizabeth Bauer .....	Columbus
Jean Wills Bigger .....	Columbus
Uda Mae Bolen .....	Columbus
Dorothy Marie Bolin .....	Columbus
Josephine Brown .....	Columbus
Dorothy Catherine Cassidy .....	Bellefontaine
Helen Sylvia Cohen .....	Columbus
Mary Angela Costigan .....	Toledo
Marie Davis .....	Columbus
Esther Almeda Decker .....	Columbus
Mary Lucile Derivan .....	New Vienna
Mildred Kathryn Dietsch .....	Findlay
Adaline Margaret Drake .....	Columbus
Constance Mary Durbin .....	Danville
Clifford Otis Eddy .....	Ellicottville, N. Y.
Taliesin D. Evans .....	Columbus
Eleanor Mary Ferris .....	Columbus
Nancy Helen Folsom .....	Franklin Furnace
Gertrude May Ford .....	Columbus
Marguerite Frey .....	New Richmond
Earl Raymond Gabler .....	Chillicothe
Pansy M. Gabriel .....	Ostrander
Estella May Gerhardt .....	Mt. Sterling
Lora Elizabeth Gilbert .....	Columbus
Raymond Givens .....	Kirtland
Christine Louise Grant .....	Middleport
Mary Gray .....	Woodsfield
Marie Ann Hauenstein .....	Columbus
Dorothy Louise Haynes .....	Winchester, Ind.
George Whiting Hibbitt .....	Louisville, Ky.
Durlin Charles Hickok .....	Martinsville
Mary Smith Hoffman .....	Columbus
Fawn Carman Holland .....	Lancaster
Ruth Walker Homeier .....	Columbus
William Vermillion Houston .....	Columbus
Helen Winner Howard .....	Columbus
Helen Ione Hulett .....	Columbus
Helen Hunter .....	Lockbourne
Mary Josephine Innis, B. A. (Ohio Wesleyan University) .....	Columbus
Katheryn Irwin .....	Sunbury
Lester Lynne Jackson .....	Morrisonville, Ill.
Wilford Sherwood Janson .....	Columbus
Josephine Jennings .....	Columbus
Eleanor Jones .....	Columbus
Mildred Ruth Keel .....	Pandora
Blanche Orletta Kelly .....	Oberlin
Florence Gertrude Korner .....	Woodsfield
Leona Smith Lewis .....	Columbus
Louise Wilhelmine Losch .....	Columbus
Margaret Lucile McCormick .....	Columbus
Mabel Marie Madden .....	Columbus
Martha Lee Marcy .....	Mt. Sterling
Florentina Mathias .....	Chillicothe



Virginia Michel .....	Columbus
Elizabeth Myers Mitchell .....	Georgetown
Hortense McClellan Mohr .....	Columbus
William Lee Montgomery .....	Columbus
Mildred Marie Moul .....	Gettysburg
Jesse William Moyer (As of the Class of 1918) .....	Lakewood
Fred A. Noller .....	Arcadia
Edith Hedwig Nuber .....	Columbus
Madeleine Fern O'Brien .....	Findlay
Florence Paas .....	Columbus
Gladys Marie Palmer .....	Columbus
Helen Andrews Pickerell .....	Columbus
Nina Elsie Theo Powell .....	Columbus
Hilda Rogers Prickett .....	Salem
Minnette Fritts Proctor .....	Kenilworth, Ill.
Consuelo Blue Reinbolt .....	Hamler
Clara Ethel Robe .....	South Charleston
Harold Richard Scheufler .....	Upper Sandusky
Mildred Ruth Schmidt .....	Chillicothe
Carl Milton Senn, B. Sc. in Agr. ....	Attica
Mary Madeleine Shover .....	Grove City
Genevra Amelia Shull (As of the Class of 1919) .....	Gahanna
Mary Ruth Shull .....	Gahanna
George E. Sidle .....	Richwood
Ruth Slemmons .....	Columbus
Audrey Peters Smith .....	Columbus
Helen Gertrude Smith .....	Columbus
Robert Ernest Smith .....	Columbus
Clara Belle Spilker .....	Perrysburg
Helen Eliza Swisher .....	Columbus
Helen Virginia Terry, B. A. ....	Columbus
Helen Mary Trafter .....	Galloway
Wilma Luella Trappe .....	Port Jefferson
Mildred Wilamine Trautman .....	Columbus
James Marion Turner, B. S. (Dixon College) .....	Mansfield
Tsu Yin Wen .....	Tientsin, China
Ruth Eleanor Wertz .....	Baltimore
Mildred Florence Wharton .....	Logan
Kathryn Woods Wilkinson, B. A. ....	Toledo
Margaret Iola Williams .....	Columbus

(One hundred candidates)

## DEGREES CONFERRED DURING THE CURRENT ACADEMIC YEAR

## BACHELOR OF SCIENCE IN EDUCATION

## As of the Class of 1918

Robert Hosack Karch .....	Columbus
---------------------------	----------

(One candidate)

## As of the Class of 1919

Edward Christian Basselman, B. A. ....	Conneautville, Pa.
Loyd Slavens Bloomfield .....	Westerville
Mildred Jean Bumgardner .....	Toledo
Mildred Washburne Copeland .....	Columbus
Lenore Corbin .....	Columbus

Eva Mae Deyo, B. Sc. in H. E. ....	Orient
Ethel Ewing, B. A., M. A. ....	Urbana
Freeman Hugh Hoff, A. B. (Ohio Northern University).....	Washington, Mo.
Mabel Grace Robb, A. B. (Monmouth College) .....	Xenia
George Edward Roudebush .....	Goshen
Margaret Jane Rupert, M. D. ....	Westville
Lydia Schneider .....	Columbus
Ivan S. Winner .....	Pemberville
Alice Martha Zuck, B. A. (Lebanon Valley College), M. A.....	Columbus
(Fourteen candidates)	

### COLLEGE OF ENGINEERING

Acting Dean: EDWIN F. CODDINGTON

#### PROFESSIONAL DEGREE, CIVIL ENGINEERING

John Ross Chamberlin (As of the Class of 1902) .....	Columbus
Orris Joseph Miller, B. S. (Hiram College) B. C. E. ....	Columbus
Frank Carleton Wardwell (As of the Class of 1911) .....	Fairfield, Ala.
(Three candidates)	

#### BACHELOR OF ARCHITECTURE

Mary Louise Abbott .....	Columbus
John Robert Anderson, Jr. ....	Bellaire
Walter Wood Anderson .....	Bellaire
Donald Davies Bollinger .....	St. Paris
Wilson Emery Bradford .....	Columbus
Berkeley Reede Hardman .....	Berkeley, Cal.
Raymond W. Miller .....	Pataskala
Galen Francis Oman .....	Columbus
Walter Pettit .....	Clintonville
Clyde Ross Seebach .....	Harpster
Claude William Youst .....	Columbus
(Eleven candidates)	

#### BACHELOR OF ARCHITECTURAL ENGINEERING

Henry Norton Foster .....	Ashland, Ky.
Glen William Knorr .....	Toledo
Galen Francis Oman .....	Columbus
(Three candidates)	

#### BACHELOR OF CERAMIC ENGINEERING

John William Blum .....	Portsmouth
Lawrence Herbert Brown .....	Lakewood
William Edward Cramer .....	Fostoria
Franklin William Gunther .....	Wapakoneta
James Wilson Hepplewhite, Jr. ....	Cleveland
Richard Everett Jones .....	Lima
Eugene Kenneth Koos (As of the Class of 1919) .....	Newark
Gerald Ziegler Minton .....	Sidney
Yu Yee Wong .....	Hsing-Shan, Canton, China
Carl George Zwerner .....	Columbus
(Ten candidates)	



## BACHELOR OF CHEMICAL ENGINEERING

Clifford Raymond Athy .....	Springfield
Ralph Daniel Baker .....	Dayton
Frederick Vernon Douth .....	Salem
Philip Mauro Foote .....	Cleveland
Albert Shibley Fultz .....	Columbus
Paul DeWitt Gephart .....	Miamisburg
Russell Floyd Hamilton .....	Fresno
Marion Wesley Frederick Harman .....	Creston
John Willard Horne .....	LaRue
Harry Clay Howell .....	Columbus
Gabriel Henry Katz .....	Marion
Richard Robert Kennedy .....	Dayton
Stuart Anderson Koegele .....	Toledo
Louis John Mathias, Jr. ....	Toledo
James McKee Montgomery .....	Los Angeles, Cal.
Robert Ernest Mueller .....	Cleveland
Angus Herman Orr .....	Columbus
Roy Pastor .....	Oak Hill
Victor Jerome Roehm .....	Dayton
Harold Theodore Reiner Ruff .....	Lancaster
Cornelius John Ryan .....	Ravenna
Ronald Wade Thompson .....	Montpelier
Harold VanDoren .....	Clyde
Joseph Melville Volzer .....	Canton

(Twenty-four candidates)

## BACHELOR OF CIVIL ENGINEERING

Clarence Dewey Bowser .....	Wauseon
Clarence Leonard Boyer .....	Washington C. H.
Frank Kennedy Brown .....	Columbus
Colin Alfred Campbell .....	Bellefontaine
Quincy Alexander Campbell .....	Bellefontaine
William Charles Dixey .....	Youngstown
Karl Michael Dussel .....	Ravenna
Walter John Essman .....	Columbus
Samuel Byron Folk .....	Marion
Eugene Francis Gallagher .....	Columbus
Harry Lynn Goodnight .....	Barnesville
Bernard Franklin Hatch .....	Canton
Charles Jensen .....	Walter, Okla.
Richard Orth .....	Dunkirk
William Evans Owens .....	Coshocton
Howard Edgell Reynolds .....	Newport
Edward Lawrence Root .....	Austinburg
Virgil Edwin Schuler .....	Sycamore
Carl John Setzer .....	Dayton
Earl Leon Sheley .....	Bloomington
Robert Bruning Sherman .....	Columbus
Ross Welling Shoemaker .....	Columbus
George Allen Shuster .....	Lima
Joseph Robert Smart .....	Baltimore
Robert Bruce Smith .....	Columbus
Delbert Carl Sprau .....	Sandusky

George Robert Steller .....	Germantown
Howard Frederick Stolz .....	Dayton
Harry Samuel Taylor .....	Westville
Christos Lazaros Terzopoulos, B. A. (Anatolia College) ..	Fatsa, Turkey in Asia
Louis Edmond Vandegrift .....	Columbus
Russell Edwin VanHorn .....	Dayton
Claude Hutchinson Wall .....	Dayton
Hugh Lynne Waugh .....	Columbus
Harold Richard Wheeler .....	Columbus
John Jenkins Williams .....	Shawnee
John Irving Wood .....	Detroit, Mich.

(Thirty-seven candidates)

## BACHELOR OF ELECTRICAL ENGINEERING

George Washington Baughman, Jr. ....	Gilboa
Julius Bosway .....	Murray City
Heer Dohrman .....	Covington, Ky.
George Frederick Drum .....	Stryker
Kenneth Lee Ervin .....	Jeffersonville
Spencer Alden Griffin .....	McComb
Charles Otis Hawkins, Jr. ....	Stockport
Otto George Hinderer .....	Huron
Dan Larmar Hoffman .....	Willard
Charles Haag Hoover .....	Columbus
Hartman Elwood Jenkins .....	Kenton
Richard Cyrus Moore .....	Columbus
Herbert Conrad Pepper .....	Columbus
Harley Phillips .....	Fredericktown
Karl Denver Price .....	Columbus
Paul Francis Rei .....	Zanesville
John Howe Roebuck .....	Richwood
Donald Mercer Terry .....	Van Wert

(Eighteen candidates)

## BACHELOR OF ENGINEERING

Christian Anton Becker .....	Columbus
Lawrence Metters Elliott .....	Columbus
Relna Merle Eyman .....	Lancaster
James Charles Francis .....	Canton
Philip Lawrence Gierich .....	Lilly Chapel
Joseph Scott Gregorius .....	Corning, N. Y.
Ernest Andrew Grimmer .....	Hamilton
Kenneth LaDoyt Hertel .....	Van Wert
Clarence Thomas Kaiser .....	Columbus
Herbert John Liedel .....	Delta
James Williard Reed .....	Columbus
Harry Alonzo Robinson .....	Middlefield
Karl Dana Rodebaugh .....	Columbus
Paul Burgess Shawen .....	Toledo
Don Carlos Steinbrenner .....	Delphos
Maurice E. Steinhilber .....	Dayton
Carroll Lane Strait .....	Columbus

(Seventeen candidates)



## BACHELOR OF MECHANICAL ENGINEERING

Harry Russel Ansel .....	Columbus
Samuel Reid Beitler .....	Columbus
Alford Gay Bradbury .....	Columbus
Glenn Ellis Edmunds .....	Warren
George Ralston Farley .....	Toledo
Ira Foreman .....	Youngstown
Willard Bryant Hafford .....	Columbus
Oscar Wengerd Heimberger .....	Columbus
Charles Leslie Heisler .....	Schenectady, N. Y.
Ronald Clive Hunter .....	Chandlersville
John Maurice Kisselle .....	Columbus
Frank August Liebich .....	Bucyrus
Robin Lincoln Miller .....	Marion
Howard Samuel Orth .....	Fostoria
Edwin August Quebe .....	Kettlersville
Charles Porter Roberts .....	Cygnets
Oscar Scherr .....	Berne, Switzerland
Fritz Louis Schweitzer .....	Ravenna
Isadore Herbert Spero .....	Dunkirk
Herman Steiger .....	Baltimore
Fillmore Dowell Swan .....	Orrville
Stanley Robert Weik .....	Hamilton

(Twenty-two candidates)

## BACHELOR OF ENGINEERING IN MINING

Raymond Keating Bowden .....	Niles
Chen Te Chiang .....	Shanghai, China
Otto Carl Gohlke .....	Findlay
Chee Kin Ho .....	Canton, China
Harry John Schwartz .....	Columbus
Albert William Seabright .....	Martins Ferry

(Six candidates)

## DEGREES CONFERRED DURING THE CURRENT ACADEMIC YEAR

As of the Class of 1919

## BACHELOR OF CHEMICAL ENGINEERING

Walter Marchland Krieger .....	Millersburg
--------------------------------	-------------

(One candidate)

## BACHELOR OF MECHANICAL ENGINEERING

Albert Aloysius Casey .....	Columbus
-----------------------------	----------

(One candidate)

## COLLEGE OF HOMOEOPATHIC MEDICINE

Dean: CLAUDE A. BURRETT

## DOCTOR OF MEDICINE

Charles Huston Minor, D. V. M. ....	Columbus
-------------------------------------	----------

(One candidate)

## ANNUAL REPORT

## DEGREE CONFERRED DURING THE CURRENT ACADEMIC YEAR

As of the Class of 1919

## DOCTOR OF MEDICINE

Jesse Isaac Jones .....New York City  
(One candidate)

## COLLEGE OF LAW

Dean: JOHN JAY ADAMS

## JURIS DOCTOR

William Aldrew Dougherty, Jr., B. A. ....Columbus  
Charles Luther Swaim, B. A. ....Wilmington  
(Two candidates)

## BACHELOR OF LAWS

Worth Arlington Bailey .....Mansfield  
Claude Jay Bartlett .....Columbus  
Forrest Revere Black, B. A. (University of Wisconsin), M. A. (Columbia  
University) .....Tiffin  
John William Bricker, B. A. ....Mt. Sterling  
Forrest Roedel Detrick .....Bellefontaine  
Thomas James Keating .....Columbus  
Wendell Hayes Lilly .....Columbus  
Harold Douglas McLaughlin .....Waverly  
Willis Woehrle Metcalf .....Columbus  
Carl Jacob Purpus, B. A. ....New Bremen  
Dana Osborne Reed .....Columbus  
Raymond Vance Shepler, B. A. ....Columbus  
Robert Richard Stephenson .....New Philadelphia  
Thurman J. Tippy .....Clayton  
Archie Homer West, B. A. ....Eagleville  
(Fifteen candidates)

## DEGREE CONFERRED DURING THE CURRENT ACADEMIC YEAR

As of the Class of 1919

## BACHELOR OF LAWS

Clarence Klinger, B. A. (Ohio Wesleyan University) .....Lima  
(One candidate)

## COLLEGE OF MEDICINE

Dean: EUGENE F. MCCAMPBELL

## DOCTOR OF MEDICINE

Carroll Glenn Barber .....Cleveland  
Elvin Jackson Bateman, B. Sc. ....Zanesville  
Will Lake Beach, D. V. M. ....Geneva  
Everett Twinem Bonar, B. Sc. ....Round Bottom  
Clarence Irvin Britt .....Mingo Junction  
Wallace Hilton Buker .....Killbuck  
Paul Richard Ensign, B. Sc. ....Bryan  
John Ellison Gamble B. S. (Ohio Wesleyan University) .....Steubenville  
Morris Goldberg, B. A. ....Columbus  
Russell LeRoy Guffey .....Portsmouth



James Howard Holmes, B. A. ....	Columbus
Carl Aaron Hyer .....	Milledgeville
Rudolph Gaylord Lewis, B. Sc. ....	Columbus
Ernest Fred Maag, B. Sc. ....	Minersville
Sarah Letitia Norton, A. B. (Vassar College) .....	Columbus
Franklin Howard Pennell .....	Fostoria
Robert Barthold Reed, B. Sc. ....	Versailles
Raymond Alward Rogers, E. M. ....	Columbus
Merle Edison Scott, B. Sc. in App. Optics. ....	Logansport, Ind.
Glen DeWitt Sheets .....	Greentown
Kenneth Douglass Sneary .....	Vaughnsville
Erwin Webster Troutman, B. Sc. ....	Worthington

(Twenty-two candidates)

## DEGREE CONFERRED DURING THE CURRENT ACADEMIC YEAR

As of the Class of 1919

## DOCTOR OF MEDICINE

Heimey Earl Levi .....	Columbus
------------------------	----------

(One candidate)

## COLLEGE OF PHARMACY

Acting Dean: CLAIR ALBERT DYE

## BACHELOR OF SCIENCE IN PHARMACY

Piccola Haslett .....	Wellston
Minnie Elizabeth Monrad .....	Portsmouth
Fred Lewis Zindler .....	Pemberville

(Three candidates)

## COLLEGE OF VETERINARY MEDICINE

Dean: DAVID STUART WHITE

## DOCTOR OF VETERINARY MEDICINE

James Bliss Ashcraft, Jr. ....	Willimantic, Conn.
James Randolph Brown, Jr. ....	Peoria, Ill.
Herbert Vincent Fleming .....	Columbus
John Charles Gensburg .....	Pittsburgh, Pa.
Norman Hanson .....	Stephen, Minn.
Claude Caridine Harman, B. Sc. in Agr. (Clemson Agricultural College) .....	Lexington, S. C.
George Everette Jacobi .....	Mondovi, Wis.
John Belton O'Neal Jacobs .....	Newberry, S. C.
Edward Charles Khuen .....	Washington, D. C.
Clinton Farley Kilbury .....	Kileville
James Cecil Kile .....	Cook Station
Abe Albert Kritt .....	Washington, D. C.
John Vincent Lange .....	Webster, N. D.
David Leffler .....	New York City
Roy Aiken Mays, B. Sc. in Agr. (Clemson Agricultural College) .....	Anderson, S. C.
Joseph Moeller .....	Cincinnati
Joe Hewell Moore .....	Carlton, Ga.
Lenord Charles Morgan .....	Cleveland
George William Ides Nelson .....	Oakland, Cal.

Nels Joseph Ides Nelson .....	Oakland, Cal.
Henry Ross .....	Brooklyn, N. Y.
Virgil William Routzong .....	Greenville
Simon David Shoulkin, B. Sc. (Cornell University) .....	Brooklyn, N. Y.
Eldavore Richard Snedden .....	North Dover
Edward Elden Sweebe .....	Rudolph
William Mogford Thaxton .....	Mason, Texas
Charles Owen Williamson .....	Columbus

(Twenty-seven candidates)

## DEGREE CONFERRED DURING THE CURRENT ACADEMIC YEAR

## As of the Class of 1919

## DOCTOR OF VETERINARY MEDICINE

George Taikin Owyang .....	Courtland, Cal.
----------------------------	-----------------

(One candidate)

## PROFESSIONAL CERTIFICATES

## CERTIFICATE IN LAW

Francis LeBlond Kloeb (As of the Class of 1918) .....	Celina
---	--------

(One candidate)

## CERTIFICATE OF PHARMACEUTICAL CHEMIST

Glenn William Barkhurst .....	Rhodesdale
George Dexter Bryant .....	Cincinnati
Louis Delucia .....	Washingtonville
John Joseph Enright .....	Urbana
Eleanor Agnes Haecker .....	Elyria
Mary Emily Haverfield .....	New London
Waldo Raymond Heiby .....	Ohio City
William James McManus .....	Coshocton
Claude Clair Moore .....	Columbus
Stuart Harris Peters .....	Mt. Gilead
Robert William Ralston .....	McConnelsville
Richard Hahn Schiller .....	Petersburg
Frederick August Schob .....	Marietta
Rose Shuall .....	Columbus
John Spencer Smith .....	Sharon, Pa.
Charles Chester Watson .....	Columbus
Roy Lewis Wentz .....	Mansfield

(Seventeen candidates)

## CERTIFICATES GRANTED DURING THE CURRENT ACADEMIC YEAR

## As of the Class of 1919

## CERTIFICATE OF PHARMACEUTICAL CHEMIST

Arthur Michael McGory .....	Sandusky
Valerio Rodriguez Sosa .....	Rodas, Cuba
Bienvenido Rumbaut Yanes .....	Cienfuegos, Cuba

(Three candidates)



## RELIGIOUS CENSUS OF STUDENTS

1919-1920

Adventist .....	4	Jewish .....	235
Baptist .....	297	Latter Day Saints .....	4
Catholic .....	489	Lutheran .....	416
Christian .....	233	Mennonite .....	1
Christian Science .....	50	Methodist .....	2143
Church of Christ .....	94	Moravian .....	2
Church of God .....	4	New Thought .....	2
Church of New Jerusalem.....	2	Presbyterian .....	1084
Community .....	8	Protestants .....	54
Congregational .....	327	Progressive Brethren .....	3
Disciple .....	65	Reformed .....	110
Dunkard .....	2	Spiritualist .....	1
Episcopal .....	259	Swedenborgian .....	2
Evangelical .....	66	Unitarian .....	11
Friends .....	20	United Brethren .....	215
Greek Protestant .....	1	United Presbyterian .....	62
Gregorian .....	8	Universalists .....	23
Hindu .....	1	Welsh .....	1
Independent Protestant .....	7	None Given .....	295

## CENSUS OF OCCUPATION OF PARENTS

1919-1920

Accountants, bookkeepers, clerks, etc. ....	179	Decorators and Painters .....	20
Actor .....	1	Dentists .....	43
Advertisers .....	4	Detectives and Policemen .....	15
Anti-Saloon League and Y. M. C. A. ....	15	Druggists and Pharmacists.....	53
Architects and Draftsmen .....	23	Editors and Newspaper Men....	22
Army .....	9	Electricians .....	12
Artisans .....	253	Engineers .....	140
Attorneys and Judges .....	159	Farmers .....	1459
Auctioneers .....	2	Fish Dealers and Grocers.....	104
Bakers and Confectioners.....	25	Florists and Gardeners .....	48
Bankers .....	91	Foremen .....	83
Barbers .....	22	Garage Owners and Employees..	24
Blacksmiths .....	14	Government and City Officials..	183
Brick and Stone Masons .....	9	Grain and Lumber Dealers.....	58
Business Men .....	37	Guardians .....	24
Butchers and Meat Dealers.....	23	Harness Maker .....	1
Carpenters .....	86	Hotel and Restaurant Proprie- tors .....	22
Cartoonist .....	1	Insurance Men .....	59
Chauffeurs and Teamsters .....		Inventor .....	1
Chemists .....	5	Iron Workers and Moulders....	15
Chiroprapist .....	1	Janitors .....	7
Coal Dealers and Oil Producers	52	Jewelers .....	17
Contractors .....	137	Junk Dealers .....	13
Dairymen and Stock Dealers....	38	Laborers .....	72
Deceased .....	25	Lake Captains .....	2
		Laundrymen .....	5

Liquor Dealers .....	9	Public Speaking .....	3
Liverymen and Teamsters.....	26	Railroad and Street Car Officials and Employees .....	182
Machinists .....	71	Real Estate .....	98
Manufacturers .....	121	Retired .....	111
Mechanics .....	45	Safe Expert .....	1
Merchants .....	391	Salesmen .....	252
Millers .....	11	Secretaries and Treasurers.....	53
Milliners and Dressmakers .....	7	Stenographers .....	2
Miners .....	7	Superintendents and Managers..	423
Ministers .....	120	Superintendents and Principal (School) .....	28
Musicians .....	10	Tailors .....	40
Mothers (without profession) ..	371	Tanners .....	3
Mothers (with profession) .....	34	Telegraphers .....	10
Navy Men .....	3	Theatrical Business .....	2
None Given .....	346	Teachers and Professors .....	94
Opticians .....	14	Undertaking .....	12
Photographers .....	7	Veterinary .....	24
Physicians .....	185		
Plumbers .....	20		
Printers .....	25		

## ENROLLMENT BY COUNTIES OF OHIO

1919-1920

Adams .....	7	Geauga .....	16
Allen .....	62	Greene .....	28
Ashland .....	23	Guernsey .....	43
Ashtabula .....	56	Hamilton .....	55
Athens .....	26	Hancock .....	38
Auglaize .....	38	Hardin .....	38
Belmont .....	68	Harrison .....	28
Brown .....	20	Henry .....	15
Butler .....	65	Highland .....	20
Carroll .....	5	Hocking .....	20
Champaign .....	43	Holmes .....	16
Clark .....	50	Huron .....	43
Clermont .....	16	Jackson .....	23
Clinton .....	33	Jefferson .....	41
Columbiana .....	61	Knox .....	52
Coshocton .....	26	Lake .....	36
Crawford .....	36	Lawrence .....	28
Cuyahoga .....	370	Licking .....	95
Darke .....	42	Logan .....	47
Defiance .....	24	Lorain .....	65
Delaware .....	45	Lucas .....	71
Erie .....	44	Madison .....	78
Fairfield .....	73	Mahoning .....	91
Fayette .....	34	Marion .....	64
Franklin .....	2167	Medina .....	49
Fulton .....	26	Meigs .....	13
Gallia .....	18	Mercer .....	34



Miami .....	63	Sandusky .....	39
Monroe .....	18	Scioto .....	39
Montgomery .....	176	Seneca .....	33
Morgan .....	17	Shelby .....	23
Morrow .....	25	Stark .....	88
Muskingum .....	13	Summit .....	83
Noble .....	10	Trumbull .....	55
Ottawa .....	18	Tuscarawas .....	60
Paulding .....	21	Union .....	37
Perry .....	27	Van Wert .....	38
Pickaway .....	47	Vinton .....	5
Pike .....	17	Warren .....	22
Portage .....	29	Washington .....	37
Preble .....	17	Wayne .....	51
Putnam .....	31	Williams .....	37
Richland .....	54	Wood .....	35
Ross .....	73	Wyandot .....	19

## ENROLLMENT BY STATES AND FOREIGN COUNTRIES

1919-1920

Alabama .....	3	Massachusetts .....	15
Argentine Republic .....	1	Michigan .....	13
Armenia .....	3	Minnesota .....	6
Austria .....	1	Mississippi .....	4
Brazil .....	3	Missouri .....	3
British Guiana .....	1	Nebraska .....	2
Bulgaria .....	1	New Hampshire .....	1
California .....	5	New Jersey .....	7
Canada .....	0	New York .....	40
China .....	20	North Carolina .....	8
Colorado .....	2	North Dakota .....	10
Columbia, S. A. ....	1	Ohio .....	6041
Connecticut .....	6	Oklahoma .....	7
Cuba .....	2	Oregon .....	1
District of Columbia .....	14	Pennsylvania .....	72
Finland .....	1	Philippine Islands .....	16
Florida .....	3	Porto Rico .....	2
France .....	2	Russia .....	1
Georgia .....	5	Scotland .....	1
Greece .....	2	South Africa .....	1
Hawaii .....	1	South Carolina .....	6
Idaho .....	2	South Dakota .....	1
Illinois .....	24	Switzerland .....	1
India .....	1	Tennessee .....	4
Indiana .....	90	Texas .....	6
Iowa .....	3	Turkey .....	3
Japan .....	3	Vermont .....	1
Kansas .....	3	Virginia .....	11
Kentucky .....	23	West Virginia .....	26
Korea .....	1	Wisconsin .....	4
Louisiana .....	1	Wyoming .....	3
Maryland .....	2		

## ENROLLMENT AND DEGREES GRANTED

1919-1920

The usual summary of enrollment and degrees granted is presented herewith:

Graduate School .....	208
College of Agriculture—	
Undergraduates, Agriculture, degree course .....	683
Undergraduates, Home Economics, degree course .....	280
Undergraduates, three-year certificate course .....	282
	<hr/> 1245
College of Arts, Philosophy and Science .....	2601
College of Commerce and Journalism .....	318
College of Dentistry .....	166
College of Education .....	476
College of Engineering .....	1488
College of Homoeopathic Medicine .....	31
College of Law .....	150
College of Medicine .....	147
College of Pharmacy—	
Undergraduates, degree course .....	51
Undergraduates, two-year certificate course .....	70
	<hr/> 121
College of Veterinary Medicine .....	103
Applied Optics .....	27
	<hr/>
Total .....	7081
Names counted twice .....	58
	<hr/>
Net total for academic year .....	7023
Summer Session, 1919—	
Graduate School .....	164
College of Agriculture .....	82
College of Arts, Philosophy and Science .....	424
Arts-Education .....	19
College of Commerce and Journalism .....	41
College of Dentistry .....	9
College of Education .....	260
College of Engineering .....	179
College of Homoeopathic Medicine .....	5
College of Law .....	16
College of Medicine .....	11
College of Pharmacy .....	8
College of Veterinary Medicine .....	10
Applied Optics .....	1
Lake Laboratory—1919 .....	11
Winter Course in Agriculture—1919 .....	178
	<hr/>
Total .....	8441
Names counted twice .....	624
	<hr/>
Grand net total for the year .....	7817



## INDEX

---

	<i>Page</i>
Report of the President.....	3
Report—Dean of the College of Agriculture .....	24
Report—Dean of the College of Art, Philosophy and Science .....	71
Report—Dean of the College of Commerce and Journalism .....	93
Report—Dean of the College of Dentistry .....	99
Report—Dean of the College of Education .....	105
Report—Dean of the College of Engineering .....	109
Report—Dean of the College of Homoeopathic Medicine .....	113
Report—Dean of the College of Medicine .....	117
Report—Dean of the College of Pharmacy .....	119
Report—Dean of the College of Veterinary Medicine .....	122
Report—Dean of the Graduate School .....	125
Report—Dean of Women .....	133
Report—Appointment Committee .....	139
Report—Director Student Health Service .....	141
Report—Department Physical Education .....	148
Report—Intelligence Tests .....	153
Report of the Trustees—Financial .....	156
Appendixes—	
I Board of Trustees.....	160
II Administrative Officers.....	160
III Faculty, Instructors, and Employees—Salary Roll.....	161
IV The Work of Instructors.....	189
V Degrees in Courses Conferred Since Founding of University.....	213
VI Number of Students in General, Technical and Professional Courses.	215
VII Showing Degrees and Certificates granted in 1920 .....	216

